Kentucky Academic Course Code List

Industrial Education
with Certification

Kentucky Academic Course Codes
The Kentucky Department of Education (KDE) initiated a course code project under the direction of Commissioner Pruitt in January 2017. The project ensures Kentucky is providing equitable opportunity and access to research-based student experiences that impact student success.

The results of the project include an alignment of core academic course codes to Kentucky Academic Standards. The standards aligned to the core academic course codes cannot be changed. The alignment serves as a guarantee to students across the Commonwealth that all students have equitable access to Kentucky Academic Standards. The project also provides an alignment to Kentucky's new Accountability System, 703 KAR 5:270, which measures opportunity and access provided to students across Kentucky.

The Kentucky Academic Course Code List contains a listing of course codes and descriptions along with certifications that fit the parameters for given courses. The content listed for a course cannot be changed; however, the grade range and population information listed for each course are not absolute and can vary slightly depending on the needs of the school and teacher certifications. Districts should choose the course that most closely represents the content in a given course. ***The description and content of a course are the determining factors in what should be selected.***

Contact Information:

- Districts may contact CourseCodes@education.ky.gov with questions pertaining to course codes, course content and course-standards alignment.
- Districts may contact the EPSB Division of Certification at (502) 564-4606 or dcert@ky.gov with question pertaining to certification.
- Districts may contact KHEAA at (502) 696-7397 or kees@kheaa.com with questions pertaining to KEES eligibility.

HOW TO USE THIS DOCUMENT
This document contains a listing of course codes and descriptions along with certifications that fit the parameters for given courses. The grade range listed for each course are not absolute. Please choose the course that most closely represents the content in a given course.

> EXAMPLE
> John Q Middle School had 5th, 6th, and 7th grade students taking a Visual Art course. This course would be linked to course number **500711: Visual Art – Comprehensive**, which shows a recommended grade range of 6 – 12.

Schools will link their courses on the Infinite Campus "Course Master" tab OR in the "Course" tab to courses listed in this document.

Schools may have created courses that are very unique in order to meet students' needs. If a course does not meet the definition or content of one contained in this document, please use course number **909999: School Defined Course**, and define the correct content through the LEAD report.

The course code 909999 should be used in situations where a current course code does not exist and there are no existing Kentucky Academic Standards aligned to the course. Local Boards of Education should approve the use of a district's use of a 909999 course code *before* a district begins utilizing it within Infinite Campus. Please see the Guiding Principles For Using Course Code 909999 for more information.

CERTIFICATIONS

It is important to note that the certificates listed are the ones that fit ***ALL*** of the parameters for a specific course; there may be other certificates that can teach it with slightly more restrictive parameters.

Please take note of the following information from ***The Kentucky Academic Standards*** with regard to middle school courses that are offered for high school credit.

> **High School Credit Earned in Middle School**
> It is expected that most students will earn high school credits during their high school years. However, local school districts may offer high school courses to middle level students if the following criteria are met:
>
> - the content and the rigor of the course are the same as established in the *Kentucky Academic Standards*
> - the students demonstrate mastery of the middle level content as specified in the *Kentucky Academic Standards*
> - the district has criteria in place to make reasonable determination that the middle level student is capable of success in the high school course
> - **the middle level course is taught by teachers with either secondary or middle level certification with appropriate content specialization**

Although middle level courses list the Provisional and Standard Elementary Certificates, Grades 1-8 as allowable under the parameters of these courses, they will not meet the above requirements for courses that are offered for high school credit.

This document is a guide; therefore the EPSB disclaims any warranties as to the validity of the information in this document. Users of this document are responsible for verifying information received through cross-referencing the official record in the EPSB's Division of Certification. The EPSB shall not be liable to the recipient, or to any third party using this document or information obtained therefrom, for any damages whatsoever arising out of the use of this document.

Industrial Education
(460000)

Industrial Education - Masonry
(460100)

460112 - Introductory Masonry

Grade Level: 9 - 12
Credits: 1
Description: The basic introductory course identifies various types of mortar and cement along with the use of basic masonry tools. The different methods of spacing materials on a construction site and the 6-8-10 method are emphasized, in addition to the use of the transit level, brick spacing, and modular rule. This course also focuses on laying straight and plumb brick to the line, as well as bricking gables and building columns. Setting up different types of masonry material, marking off layout lines, and erecting batter boards will be practiced, along with techniques employed in different types of weather and climates.
Content: Masonry
Population: General

777	Masonry
X777	Emergency Certificate For Teaching Masonry

460113 - Advanced Masonry

Grade Level: 10 - 12
Credits: 1
Description: The advanced course provides experience in laying quoin corners, bricking in around electrical and plumbing units, and laying door and window brick sills The student will construct expansion joints, piers, pilasters and retaining and split face block walls.
Content: Masonry
Population: General

777	Masonry
X777	Emergency Certificate For Teaching Masonry

460114 - Residential Maintenance Masonry

Grade Level: 10 - 12
Credits: 1
Description: This course covers the basic aspects of masonry as it relates to the residential structure. Emphasis is placed on proper handling, mixing, placing, and finishing of Portland cement products.
Content: Masonry
Population: General

777	Masonry
X777	Emergency Certificate For Teaching Masonry

460116 - Intermediate Masonry

Grade Level: 10 - 12
Credits: 1
Description: Builds on proficiency in competencies learned in MASE 105. Focuses on laying straight and plumb brick to the line, emphasizing bricking gables and building columns. Laboratory.

Content: Masonry
Population: General

777	Masonry
X777	Emergency Certificate For Teaching Masonry

460117 - Anchors and Reinforcement

Grade Level: 10 - 12
Credits: 1
Description: This course presents different types of reinforcement used in masonry units such as installing wall ties and reinforcing wire, tying intersecting walls with metal ties, installing masonry anchor bolts, setting and anchoring door and window frames, and setting steel lintels and bearing plates. Students will also install dovetail ties to concrete, set preformed masonry lintels, and lay paving brick in a herringbone pattern.
Content: Masonry
Population: General

777	Masonry
X777	Emergency Certificate For Teaching Masonry

460118 - Fireplace Construction

Grade Level: 10 - 12
Credits: 1
Description: This course presents different types and styles of indoor and outdoor fireplaces, and the principles of layout, drafting, and drawing a fireplace. Finishing dimensions of fireplace opening, firebox layout, setting the flue lining, and applying a chimney cap are also included.
Content: Masonry
Population: General

777	Masonry
X777	Emergency Certificate For Teaching Masonry

460119 - Concrete Finishing

Grade Level: 10 - 12
Credits: 1
Description: The focus of this course is on the theory and techniques inherent in the art of concrete finishing.
Content: Masonry
Population: General

777	Masonry
X777	Emergency Certificate For Teaching Masonry

460179 - Special Problems (Masonry)

Grade Level: 10 - 12
Credits: 1
Description: This course is designed for the student who has demonstrated specific special needs.
Content: Masonry
Population: General

777	Masonry
X777	Emergency Certificate For Teaching Masonry

460180 - Co-op (Masonry)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Masonry
Population: General

777	Masonry
X777	Emergency Certificate For Teaching Masonry

460183 - Internship (Masonry)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Masonry
Population: General

777	Masonry
X777	Emergency Certificate For Teaching Masonry

460199 - Special Topics - Masonry

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Industrial Education - Masonry but not described in the above courses.
Content: Masonry
Population: General

777	Masonry
X777	Emergency Certificate For Teaching Masonry

Industrial Education - Construction Carpentry
(460200)

460201 - Introduction to Construction Technology

Grade Level: 9 - 12
Credits: 1
Description: This course is broad-based with emphasis on all phases of the construction process, including safety; legal and permitting requirements; site selection; excavation; foundation; utilities; framing and structural components; interior and exterior finishing. Topics also include: Tool and equipment selection, safety and use; preventive maintenance; materials inventory, waste management and prevention.
Content: Construction Technology for Industrial Ed. Credit
Population: General

766	Carpentry
800	Heavy Equipment Repair
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460209 - Cabinet Construction and Installation

Grade Level: 10 - 12
Credits: 1
Description: Students will layout and plan the construction of base and wall cabinets. They will construct, sand, prepare wood surfaces for finishing, install cabinets and special units.
Content: Residential/Commercial Carpentry
Population: General

766	Carpentry
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460212 - Floor and Wall Framing

Grade Level: 9 - 12
Credits: 1
Description: The student will practice floor framing, layout, and construction of floor frames. Cutting and installing floor and wall framing members according to plans and specifications will also be practiced.
Content: Residential/Commercial Carpentry
Population: General

766	Carpentry
801	Building Construction

AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460213 - Ceiling and Roof Framing

Grade Level: 9 - 12
Credits: 1
Description: This course covers roof types and combinations of roof types used in the construction industry. The emphasis of this course is on layout, cutting and installing ceiling joists, rafters, roof decking, and roof coverings.
Content: Residential/Commercial Carpentry
Population: General

766	Carpentry
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460214 - Site Layout and Foundations

Grade Level: 10 - 12
Credits: 1
Description: Students will prepare materials, calculate the cost for a building site, and lay out a site with a transit, locating property lines and corners. Students calculate the amount of concrete needed for footing and foundation walls and construct different types of foundations and forms.
Content: Residential/Commercial Carpentry
Population: General

766	Carpentry
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460215 - Construction Technology for Industrial Education Credit

Grade Level: 9 - 12
Credits: 1
Description: Additional instructional programs that prepare individuals to apply technical knowledge and skills in the construction cluster of programs.
Content: Construction Technology for Industrial Ed. Credit
Population: General

766	Carpentry
800	Heavy Equipment Repair
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460217 - Construction Prints

Grade Level: 10 - 12
Credits: 0.5
Description: This course will provide a series of lectures, demonstrations, and practice exercises in the study of symbols, views, sections, details, and material lists found on architectural working drawings, building materials and specifications lists, and construction dimensioning systems and charts/schedules.
Content: Residential/Commercial Carpentry
Population: General

766	Carpentry
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460218 - Construction Forms

Grade Level: 10 - 12
Credits: 1
Description: This course will introduce the student to heavy and commercial construction. The student will receive information about rigging, mall forms, vertical piers and columns, grade curb forms, horizontal beam forms, above-grade slab systems, fireproof encasement forms, stair forms, bridge and bridge deck forms.
Content: Residential/Commercial Carpentry
Population: General

766	Carpentry
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460219 - Exterior and Interior Finish

Grade Level: 10 - 12
Credits: 1
Description: This course presents basic concepts of building trim, gypsum wallboard, paneling, base, ceiling and wall molding with instruction on acoustical ceilings and insulation, wood floors, tile, inlaid adhesive and tools of the flooring trade. This course will continue to refine the techniques and skills taught in the previous carpentry courses. In this course, cost control, speed, and precision are emphasized. In addition, students will perfect the skills associated with the exterior finishing of a house.
Content: Residential/Commercial Carpentry
Population: General

766	Carpentry
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460220 - Residential Maintenance Carpentry

Grade Level: 10 - 12
Credits: 1
Description: This course covers the basic aspects of framing, roofing, window, door, and stair maintenance. The student will receive training in the proper use of ladders and in the handling and storage of building materials.
Content: Residential/Commercial Carpentry
Population: General

766	Carpentry
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460222 - Residential Interior Maintenance

Grade Level: 10 - 12
Credits: 1
Description: This course covers the basic aspects of drywall hanging, finishing, and repair; painting; window, door, and floor moldings; laying composition and vinyl flooring; and maintaining ceramic tile.
Content: Residential/Commercial Carpentry
Population: General

766	Carpentry
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460229 - Co-op (BAM)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Building and Apartment Maintenance
Population: General

764	Building Maintenance
X764	Emergency Certificate For Teaching Building Maintenance

460232 - Internship (BAM)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has

an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Building and Apartment Maintenance
Population: General

764	Building Maintenance
X764	Emergency Certificate For Teaching Building Maintenance

460241 - Introduction to Building & Apartment Maintenance

Grade Level: 9 - 12
Credits: 1
Description: This course covers required safety practices in the shop and workplace; identification and use of hand tools used in the construction trades; identification of construction materials; interpretation of blueprints and/or drawings; and exposure to various mechanical and structural systems in a residential structure.
Content: Building and Apartment Maintenance
Population: General

764	Building Maintenance
X764	Emergency Certificate For Teaching Building Maintenance

460242 - Co-op (Carpentry)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Residential/Commercial Carpentry
Population: General

766	Carpentry
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460245 - Internship (Carpentry)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Residential/Commercial Carpentry
Population: General

766	Carpentry
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry

X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460290 - Construction Trades, Other

Grade Level: 9 - 12
Credits: 1
Description: Additional instructional programs that prepare individuals to apply technical knowledge and skills in the building, inspecting, and maintaining of structures and related properties.
Content: Construction Technology for Industrial Ed. Credit
Population: General

766	Carpentry
800	Heavy Equipment Repair
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

460298 - Special Topics (Construction Carpentry)

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Industrial Education Construction Cluster but not described in the above courses.
Content: Construction Technology for Industrial Ed. Credit
Population: General

766	Carpentry
800	Heavy Equipment Repair
801	Building Construction
AJCA	Adjunct Instructor For Carpentry
S766	Approval For Teaching Preparation Level Carpentry
X766	Emergency Certificate For Teaching Carpentry
X801	Emergency Certificate For Teaching Building Construction

Industrial Education - Electrical Technology
(460300)

460305 - Transformers

Grade Level: 10 - 12
Credits: 1
Description: Focuses on the operation, installation and application of AC single-phase and three-phase transformers. Testing and maintaining transformer equipment are emphasized, with safety integrated as a core component of the study.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460311 - DC Circuits

Grade Level: 9 - 12
Credits: 1
Description: Introduces the theory of electricity and magnetism, and the relationship of voltage, current, resistance, and power in electrical circuits. Circuit analysis techniques are stressed. DC circuits are analyzed using Ohm's Law, Kirchoff's Laws, and various network theorems.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460312 - Electrical Construction I

Grade Level: 9 - 12
Credits: 1
Description: Involves the study of materials and procedures used in construction wiring.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460313 - Electrical Construction II

Grade Level: 10 - 12
Credits: 1
Description: Expands the knowledge and skills needed to work in commercial and industrial construction wiring.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460316 - Circuits I

Grade Level: 10 - 12
Credits: 1.5
Description: Introduction to basic theory of DC and AC circuits, including circuit analysis techniques, introductory magnetism, and transformer principles.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460319 - Circuits II

Grade Level: 10 - 12
Credits: 1.5
Description: Complex alternating current and direct current circuits. Emphasis is on impedance, reactance, power and electrical energy, electrical measurement instruments, and circuit analysis.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460323 - Rotating Machinery

Grade Level: 10 - 12
Credits: 1
Description: Focuses on the underlying principles of rotating electrical equipment including DC and AC motors and generating equipment construction, operating applications, and the maintenance of DC and AC motors and generating equipment.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460325 - Rotating Machinery Electrical Motor Controls

Grade Level: 10 - 12
Credits: 1
Description: This course focuses on the construction, operation and maintenance of DC motors and generators and AC motors and alternators. This course addresses the diversity of control devices and applications used in industry today. Safety and electrical lockouts are also included.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460329 - Basic Electricity for Non-Majors

Grade Level: 10 - 12
Credits: 0.5
Description: This course introduces non-majors to the basic physics of electricity. Students apply Ohm's law; measure resistance, voltage, ohms, watts and amps; construct various types of electrical circuits; select wire and fuse sizes; and learn to troubleshoot an electric motor and coil.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460331 - Electrical Motor Controls

Grade Level: 10 - 12
Credits: 1
Description: This course addresses the diversity of control devices and applications used in industry today. Safety and electrical lockouts are also included.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460333 - Residential Maintenance Wiring

Grade Level: 10 - 12
Credits: 1
Description: This course covers the basic aspects of electric theory, wire and cables, fixtures and devices, and troubleshooting and maintenance wiring.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460339 - National Electrical Code

Grade Level: 10 - 12
Credits: 0.5
Description: Emphasizes the importance of the National Electrical Code as it applies to electrical installations: electrical safety issues, prevention of fire due to the use of electrical energy, prevention of loss of life and property from the hazards that might arise from the use of electrical energy, and proper selection of electrical equipment for hazardous and non-hazardous environments. A learning resource in the preparation for electrical licensing examinations.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460340 - Sustainable Energy Systems

Grade Level: 10 - 12
Credits: 1
Description: Examines the sustainability of various energy resources. An overview of energy technology, energy resources, and emerging future energy technologies coupled with our energy use will bring into context the strengths and weaknesses of different energy methodologies in developing a working concept of sustainable energy.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460342 - Renewable Energy Systems

Grade Level: 10 - 12
Credits: 1
Description: Examines the need for alternative and renewable energy resources as a survey course providing citizens from all walks of life an understanding for responsible stewardships of technologies that will contribute to the sustainability of energy in our present and future societies. The object of this course is to take a more in-depth look at renewable energy forms and the replacement of fossil fuels in our society. Through wind, solar, and biomass this class will focus on live projects and scientific studies and comparisons of feasibility.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460344 - Renewable Energy Systems (Special Problems)

Grade Level: 10 - 12
Credits: 0.5
Description: The object of this course is to take a more in-depth look at renewable energy forms and the replacement of fossil fuels in our society. Through scientific research methods, portfolio and presentations, students will focus on live projects, social energy issues problems and solutions using comparisons of

feasibility.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460345 - Co-op (Electrical)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460348 - Internship (Electrical)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460377 - Special Problems - Electrical Technology

Grade Level: 10 - 12
Credits: 1
Description: A course designed for the student who has demonstrated specific special needs.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

460399 - Special Topics - Electrical Technology

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Electrical Technology but not described in the above courses.
Content: Electrical Technology
Population: General

773	Electricity
AJELC	Adjunct Instructor for Electricity
X773	Emergency Certificate For Teaching Electricity

Industrial Education - Heavy Equipment
(460400)

460403 - Heavy Highway Construction Equipment Repair

Grade Level: 9 - 12
Credits: 1-5
Description: The maintenance of heavy highway equipment and the related studies in construction.
Content: Heavy Highway Construction
Population: General

768	Diesel Technology
800	Heavy Equipment Repair
X768	Emergency Certificate For Teaching Diesel Technology

460404 - Heavy Equipment Operation

Grade Level: 9 - 12
Credits: 1-5
Description: The operation of heavy equipment and the related studies in construction.
Content: Heavy Equipment Operation
Population: General

800	Heavy Equipment Repair

460499 - Special Topics - Heavy Equipment

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Industrial Education - Heavy Equipment but not described in the above courses.
Content: Heavy Equipment Operation
Population: General

800	Heavy Equipment Repair

Industrial Education - Plumbing Technology
(460500)

460511 - Introduction to Plumbing

Grade Level: 9 - 12
Credits: 1
Description: This course introduces the origin and basic principles of the plumbing industry. Also included is the orientation of methods associated with the plumbing industry.
Content: Plumbing Technology
Population: General

780	Plumbing
X780	Emergency Certificate For Teaching Plumbing

460512 - Plumbing Systems

Grade Level: 9 - 12
Credits: 1
Description: This course presents a study of designing and sizing water distribution, drain, waste, and vent pipes, in addition to studies of code requirements and installation of common residential fixtures.
Content: Plumbing Technology
Population: General

780	Plumbing
X780	Emergency Certificate For Teaching Plumbing

460513 - Basic Plumbing Skills

Grade Level: 9 - 12
Credits: 1
Description: This course introduces the student to basic pipe joining techniques.
Content: Plumbing Technology
Population: General

780	Plumbing
X780	Emergency Certificate For Teaching Plumbing

460514 - Bathroom Install

Grade Level: 9 - 12
Credits: 1
Description: This course will develop the skills necessary to rough-in and install a bathroom group and auxiliary fixtures for residential or commercial applications.
Content: Plumbing Technology
Population: General

780	Plumbing
X780	Emergency Certificate For Teaching Plumbing

460515 - Kitchen Install

Grade Level: 10 - 12
Credits: 1
Description: This course will develop the skills necessary to rough in and install a kitchen group and laundry fixtures for residential and commercial applications.
Content: Plumbing Technology
Population: General

780	Plumbing
X780	Emergency Certificate For Teaching Plumbing

460516 - Residential Maintenance Plumbing

Grade Level: 10 - 12
Credits: 1
Description: This course covers the basic aspects of clearing blocked drains, repairing leaks, repair and replacement of residential plumbing fixtures, and working with copper, plastic, and steel pipes.
Content: Plumbing Technology
Population: General

780	Plumbing
X780	Emergency Certificate For Teaching Plumbing

460518 - Co-op I (Plumbing)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Plumbing Technology
Population: General

780	Plumbing
X780	Emergency Certificate For Teaching Plumbing

460521 - Internship (Plumbing)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Plumbing Technology
Population: General

780	Plumbing

X780	Emergency Certificate For Teaching Plumbing

460599 - Special Topics - Plumbing

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Plumbing Technology but not described in the above courses.
Content: Plumbing Technology
Population: General

780	Plumbing
X780	Emergency Certificate For Teaching Plumbing

Industrial Education - Mining Technology
(460700)

Industrial Education - HVAC/ Air Conditioning Technology (460800)

460801 - Heat Pump Application

Grade Level: 10 - 12
Credits: 1
Description: Explains reverse cycle heating systems, defrost cycles, reversing valves, and auxiliary heating. This course will also concentrate on the line and control voltage circuitry pertaining to these units. ARI Controls: Subtopic E; Heat Pump Systems: Subtopics A and B; System Installation and Start-Up: Subtopic C; System Servicing and Troubleshooting: Subtopic E
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460804 - Residential Energy Auditor Prep

Grade Level: 10 - 12
Credits: 1
Description: This course will provide step by step instruction and best practices involved in performing a residential energy audit. Ethics and customer relations, energy consumption and quality control inspecting. Building shell diagnosing, shell leakage, evaluating heating systems. Evaluation base load measures, windows, doors, and exterior insulation evaluations. Mobile homes and health and safety issues are also covered.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460806 - Green Awareness/Energy Management

Grade Level: 10 - 12
Credits: 1
Description: This course will instruct students in the areas of energy management and analysis, green heating, ventilation, air conditioning and refrigeration. It will also cover electrical generation and consumption as well as green plumbing.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460817 - HVAC Electricity

Grade Level: 9 - 12
Credits: 1
Description: This course introduces students to the basic physics of electricity. Students apply Ohm's law; measure resistance, voltage, ohms, watts and amps; construct various types of electrical circuits; select wire and fuse sizes; and learn to troubleshoot an electric motor and motor controls.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460818 - Residential HVAC Maintenance

Grade Level: 10 - 12
Credits: 1
Description: This course covers the basic aspects of maintaining various heating, ventilating, and air conditioning systems in residential buildings.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460820 - Heating and Humidification

Grade Level: 10 - 12
Credits: 1
Description: Explains heating systems from simple fossil fuel furnaces through more complex systems. This course will also concentrate on the line and control voltage circuitry pertaining to these systems. ARI Controls: Subtopics A-C; Heating Systems: Subtopics A-C; System Installation and Start-Up: Subtopics A and B; System Servicing and Troubleshooting: Subtopic C; Tools and Equipment: Subtopic D
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460822 - Commercial Refrigeration

Grade Level: 9 - 12
Credits: 1
Description: Develops techniques for servicing and troubleshooting mechanical and electromechanical refrigeration components. Electrical and refrigeration safety are emphasized. Proper tool use and environmentally sound refrigerant handling are taught.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460824 - Cooling and Dehumidification

Grade Level: 9 - 12
Credits: 1
Description: Explains the working characteristics of air conditioning units with air and water cooled

condensers. Line, low voltage and pneumatic controls will also be covered. ARI - Air Conditioning Systems: Subtopics A-E; System Installation and Start-Up: Subtopic D; System Servicing and Troubleshooting: Subtopic D; Controls: Subtopic D.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460826 - Electrical Components

Grade Level: 9 - 12
Credits: 1
Description: This course defines the electrical components of an air conditioning system. Different types of line voltages, wiring diagrams, and solid-state devices are included. Safety is emphasized.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460828 - Refrigeration Fundamentals

Grade Level: 9 - 12
Credits: 1
Description: Introduces the fundamentals of refrigeration, refrigeration terms, and the basic refrigeration cycle. Proper use of tools, test equipment, and materials is stressed. Environmental issues including refrigerant handling are discussed. Refrigerant piping and methods used to join them are taught. General and specific safety is emphasized.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460845 - Ice Machines

Grade Level: 10 - 12
Credits: 1
Description: Introduces the operation, checking, adjusting, and troubleshooting of commercial ice makers. The student will learn to adjust, check, clean, and troubleshoot commercial ice machines.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460846 - Journeyman Preparation

Grade Level: 10 - 12
Credits: 0.5
Description: A series of lectures, discussions, and presentations pertaining to the proper application of HVAC codes. The class will help prepare the student to pass the Kentucky Journeyman HVAC licensing exam.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460847 - Sheet Metal Fabrication

Grade Level: 10 - 12
Credits: 1
Description: The student will learn to make patterns and lay out and construct common sheet metal duct fittings.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460877 - Special Problems (AIR COND)

Grade Level: 10 - 12
Credits: 1
Description: This course provides advanced experiences in the trade theories and practices appropriate for the occupational objectives of the student.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460880 - Co-op (Air Cond)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

460883 - Internship (Air Cond)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating

X760	Emergency Certificate For Teaching Air Conditioning & Heating

460890 - Special Topics - HVAC

Grade Level: 9 - 12
Credits: 0.5 - 1
Description: Instruction related to Industrial Education - HVAC but not described in the above courses.
Content: Air Conditioning Technology
Population: General

760	Air Conditioning & Heating
X760	Emergency Certificate For Teaching Air Conditioning & Heating

Industrial Education - Public Services
(461000)

461011 - Basic Telecommunications

Grade Level: 9 - 12
Credits: 1
Description: This course is a study of basic emergency communications and of the federal and state laws that govern these communications; telephone and radio communications systems; communication documentation; emergency management; 911; stress and crisis management.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461012 - Bloodborne Pathogens

Grade Level: 9 - 12
Credits: 1
Description: This course provides bloodborne pathogens education for emergency responders, health professionals, and others who are subject to exposure, in the 1) transmission; 2) prevention and control; 3) treatment; 4) legal issues; and 5) attitudes and behavior regarding human infections, and covers requirements of OSHA 1910.1030.
Content: EMS Training
Population: General

430	Emergency Medical Services
AJEM	Adjunct Instructor for EMS Training

461013 - Emergency Management

Grade Level: 10 - 12
Credits: 1
Description: Commanding the Initial Response is designed to give the participant the information and skills necessary to establish command, perform size-up, develop and implement an action plan, transfer command, and organize an incident using an effective command system.
Content: Emergency Services
Population: General

410	Law Enforcement
420	Fire Service Technology
430	Emergency Medical Services
440	Homeland Security

461014 - First Aid

Grade Level: 9 - 12
Credits: 1
Description: This course addresses the knowledge and skills for administering the first aid including the assessment and treatment of patients sustaining injury or sudden illness until a higher level of trained emergency care technician arrives.
Content: EMS Training
Population: General

430	Emergency Medical Services
AJEM	Adjunct Instructor for EMS Training

461015 - Hazardous Materials Awareness

Grade Level: 9 - 12
Credits: 1
Description: This course introduces the student to the principles of recognizing hazardous materials presence, protecting themselves from hazardous materials and calling for training/personnel, and securing the area safety.
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461018 - Health and Well-Being for Law Enforcement

Grade Level: 9 - 12
Credits: 1
Description: his course is designed to give the student an overview of personal fitness and wellness including how to maintain good physical fitness and proper nutrition. The course will also give the student an overview of the warning signs of and how to deal with stress in the law enforcement profession.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461019 - Civil Law and Procedures

Grade Level: 9 - 12
Credits: 1
Description: This course is designed to provide students with a comprehensive overview of civil law, both substantive and procedural. Critical case law analysis will be emphasized as an integral part of the course.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461020 - Criminal Law and Procedures

Grade Level: 9 - 12
Credits: 1
Description: This course is designed to provide students with an overview of criminal law, both substantive and procedural. Upon successful completion of this course, students will have acquired an understanding of the criminal prosecutorial process, while also learning the elements of individual crimes. In addition, students will have gained an appreciation for the balance of personal accountability with constitutionally-protected rights.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461021 - CPR

Grade Level: 9 - 12
Credits: 1
Description: This course provides the knowledge and skills for administering care for respiratory or cardiac arrest including airway, breathing, and circulation assessment and the procedures to eliminate blockage of the airway, provide breathing assistance, and cardiac compressions.
Content: EMS Training
Population: General

430	Emergency Medical Services
AJEM	Adjunct Instructor for EMS Training

461022 - Emergency Medical Technician (EMT)

Grade Level: 9 - 12
Credits: 1
Description: This basic Emergency Medical Technician Course covers all knowledge aspects of trauma care as outlined by national standards, created by federal guidelines, considered to be the responsibilities of ambulance operations. Training involves typical anatomy and physiology; patient assessment; care for respiratory and cardiac emergencies; control of bleeding; application of dressing and bandages; treatment for traumatic shock; care for fractures, dislocation, sprains and strains; medical emergencies; emergency child birth; burns and heat emergencies; environmental emergencies; principles of vehicle rescue; transportation of patients and general operations of ambulance systems.
Content: EMS Training
Population: General

430	Emergency Medical Services
AJEM	Adjunct Instructor for EMS Training

461023 - EMS Training

Grade Level: 9 - 12
Credits: 1-6
Description: Public Service Program that provides instruction in Emergency Medicine.
Content: EMS Training
Population: General

430	Emergency Medical Services
AJEM	Adjunct Instructor for EMS Training

461031 - Firefighters Basic Skills III

Grade Level: 10 - 12
Credits: 1
Description: This course includes Kentucky Fire Commission Training topics V0000 Building Construction, FC30000 KY Wildland Fire Awareness, M0000 Fire Control, H0000 Ventilation, Y0000 Fire Investigation, C0000 Communications, U0000 Fire Prevention, O0000 Victim Search/Rescue, Q0001 Vehicle Rescue, FC10000 KY FF Survival, and FC20000 KY FF Rescue.
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461032 - Firefighters Basic Skills I

Grade Level: 9 - 12
Credits: 1
Description: This course includes Kentucky Fire Commission Training topics I0000 Ropes, J0000 Ladders, W0000 Aircraft Rescue, Q0000 Rescue, P0021 First Aid, P0002 Bloodborne Pathogens, X0000 Emergency Disaster Planning, G0000 Forcible Entry, and P0001 CPR.
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461033 - Introduction to Fire Service

Grade Level: 9 - 11
Credits: 1
Description: This course includes Kentucky Fire Commission Training topics A0000 Administration & Organization, D0000 Fire Behavior, B0000 Safety, F0000 Personal Protective Equipment, E0000 Extinguishers, and K0000 Hose, Nozzles, and Appliances.
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461034 - Firefighters Basic Skills II

Grade Level: 9 - 12
Credits: 1
Description: This course includes Kentucky Fire Commission Training topics R0000 Water Supply, L0000 Foam Streams, N0000 Salvage/Overhaul, S0000 Fire Alarms- Sprinklers, T0001 Hazmat Awareness, and T0002 Hazmat Operations.
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461036 - Firefighters Intermediate Skills I

Grade Level: 10 - 12
Credits: 0.5
Description: This course includes water supply, foam fire streams, fire alarms and communications, hazardous materials awareness, hazardous materials operations, sprinklers, and salvage and overhaul.
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461037 - Correctional Systems

Grade Level: 10 - 12
Credits: 1
Description: The function of custodial staff is examined with emphasis on the correctional officer. Institutional procedures are reviewed including reception, classification, program assignment and release procedures.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461038 - Introduction to Homeland Security

Grade Level: 10 - 12
Credits: 1
Description: This course focuses on security policy, planning and operations dedicated to the protection of U.S. territory, assets, infrastructure, institutions and citizens from external threats. Includes instruction in national security policy, government relations, intelligence, law enforcement, security technology, communications and information technology, homeland security planning and operations, disaster planning and applications to specific threat scenarios.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461039 - Terrorism and Counterterrorism Operations

Grade Level: 10 - 12
Credits: .5
Description: This course focuses on the study of terrorism as a global and national threat and the methods for analyzing and countering it. Includes instruction in psychology, cultural studies, terrorist history and

organization, terrorist capabilities, terrorist finance and international money-laundering, threat assessment, intelligence operations, incident command systems, border security, emergency response, joint operations, surveillance and communications systems, cyberterrorism, weapons of mass destruction, counterterrorist operations, and applications to specific terrorist organizations and threats.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461040 - Critical Infrastructure Protection

Grade Level: 10 - 12
Credits: 0.5
Description: A course focusing on the design, planning and management of systems and procedures for protecting critical national physical and cyber infrastructure from external threats, including terrorism. Includes instruction in homeland security policy, critical infrastructure policy, information security, matrix vulnerability assessment, threat assessment, physical security, personnel security, operational security, contingency planning, case analyses of specific industries and systems, redundancy planning, emergency and disaster planning, security systems, and intelligence operations.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461042 - Basic Security Services

Grade Level: 9 - 12
Credits: 1
Description: This course includes history and philosophy of security; nature and impact of security; an overview of security systems; concepts and skills for security officers; security applications; and security of the future.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461043 - Criminal Investigation

Grade Level: 10 - 12
Credits: 1
Description: This course includes investigative theory; collection and preservation of evidence, and sources of information; procedures for conducting interviews and interrogations; using forensic sciences; and preparing for cases and trials.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security

AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461044 - Introduction to Criminal Justice

Grade Level: 9 - 12
Credits: 1
Description: This course studies the history and philosophy of criminal justice, ethical considerations, definition of crime, the nature and impact of crime, an overview of the criminal justice system including law enforcement, corrections, and the court system.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461045 - Law Enforcement

Grade Level: 9 - 12
Credits: 1
Description: This course trains students to evaluate the powers granted to the police and restrictions placed upon them by respective constitutions and their amendments. Specific topics of discussion will include search and seizure, arrests, interviews, interrogations, and confessions in the context of criminal prosecution. Activities include tactics, methods, and skills utilized in the law enforcement field. Skills will be obtained in basic disaster response.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461047 - Advanced Legal Practice

Grade Level: 11 - 12
Credits: 1
Description: Advanced Legal Practice is a project-based capstone course. Students will continue to develop their legal research, writing, and oral advocacy skills by working to resolve legal issues for mock clients.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461048 - Alternative Dispute Resolution

Grade Level: 10 - 12
Credits: 1
Description: This course is designed to provide students with a comprehensive overview of dispute resolution processes and techniques that act as a means for disagreeing parties to come to an agreement

short of litigation. Upon successful completion of this course, students will have developed the skills necessary to participate in, and manage, a successful arbitration, mediation, and negotiation. Critical analysis and communication skills will be emphasized as an integral part of this course.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461049 - Appellate Advocacy

Grade Level: 10 - 12
Credits: 1
Description: This course focuses on appellate advocacy in both civil and criminal cases. After reviewing the principles of trial procedure and how these principles affect appellate work, students will examine the appellate process. Topics covered include the trial record, appellate briefing, oral argument, and application for discretionary appeal.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461050 - Constitutional Law and Civil Rights

Grade Level: 10 - 12
Credits: 1
Description: This course focuses on the U.S. Constitution and federal anti-discrimination laws. Topics covered include judicial review; the legal relationship between the federal government and states; the legal relationship between the branches of the federal government; and protection of individuals and organizations by the Bill of Rights, the Fourteenth Amendment, and federal anti-discrimination laws.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461051 - Introduction to Law

Grade Level: 9 - 12
Credits: 1
Description: This course studies the history, purpose, and function of law. Students will learn about law-related careers, study the major areas of law, gain an understanding of the court system, analyze case law, and study the adversary system.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461052 - Trial Advocacy

Grade Level: 10 - 12
Credits: 1
Description: This course focuses on trial advocacy in both civil and criminal cases. Topics covered include opening statement and closing argument, direct and cross examination, courtroom decorum, and evidence law. Additionally this course will prepare students for a competitive mock trial.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461062 - Company Officer Development

Grade Level: 10 - 12
Credits: 1
Description: This course involves information and activities that will help the student understand the role of Fire Service Company Officers
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461063 - Co-op (Fire Service/EMT)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Cooperative Education program receive compensation for their work. Work based learning is designed to complement the classroom instruction. Students will be required to follow program and agency requirements for attendance and health screenings
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461064 - Firefighting Advanced Skills I

Grade Level: 11 - 12
Credits: 1
Description: This course provides further expansion of the Firefighters Intermediate Skills I course and includes Kentucky Fire Commission Training topics Z0000 Pumper Operations, CC0000 Drivers Training, A0000 Administration and Organization, FC40000 KY Flashover, F0000 Personal Protective Equipment II, K0000 Fire Hose, and D0000 Fire Behavior.
Content: Fire Service Technology
Population: General

420	Fire Service Technology

AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461065 - Firefighting Advanced Skills II

Grade Level: 11 - 12
Credits: 1
Description: This course provides further expansion of the Firefighter Intermediate Skills II course and includes Kentucky Fire Commission Training topics D0000 Fire Behavior K0000 Fire Hose, 10000 Ropes, G0000 Forcible Entry, and F0000 Personal Protective Equipment
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461066 - Firefighting Intermediate Skills II

Grade Level: 10 - 12
Credits: 1
Description: This course includes Kentucky Fire Commission Training topics D0000 Fire Behavior, K0000 Fire Hose, 10000 ropes, G0000 Forcible Entry, and F0000 Personal Protective Equipment. Students will complete the NIMS 100, 200, 300, and 700 certifications during this course.
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461067 - Firefighting Intermediate Skills III

Grade Level: 10 - 12
Credits: 1
Description: This course provides further expansion of Firefighter Basic Skills III and includes Kentucky Fire Commission Training topics V0000 Building Construction, M0000 Fire Control, H0000 Ventilation, Y0000 Fire Investigation, C0000 Communications, U0000 Fire Prevention, O0000 Victim Search/Rescue, Q0001 Vehicle Rescue, FC10000 KY FF Survival, and FC20000 KY FF Rescue
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461068 - Internship (Fire Service/EMT)

Grade Level: 11 - 12
Credits: 1
Description: Internship provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Internship program do not receive compensation for their work. Work-based learning is designed to complement the classroom instruction. Students will be required to follow program and agency requirements for attendance and health screenings.

Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461069 - Special Topics in Fire Service

Grade Level: 11 - 12
Credits: 1
Description: Special Topics is an expanded course offering the study of emergency and fire services issues. Topics may vary at the discretion of the instructor.
Content: Fire Service Technology
Population: General

420	Fire Service Technology
AJFS	Adjunct Instructor for Fire Service Technology
X420	Emergency Certificate For Teaching Fire Rescue

461094 - Internship (Public Services/Protective Services)

Grade Level: 11 - 12
Credits: 1
Description: Internship provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Internship program do not receive compensation for their work. Work-based learning is designed to complement the classroom instruction. Students will be required to follow program and agency requirements for attendance and health screenings. Prerequisite: Students may enroll in Internship only after successful completion of at least three courses in the pathway.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461095 - Internship (Pre-Law)

Grade Level: 11 - 12
Credits: 1
Description: Internship provides supervised on-the-job work experience related to the student’s educational objectives. Students participating in the Internship program do not receive compensation for their work. Work-based learning is designed to complement the classroom instruction. Students will be required to follow program and agency requirements for attendance and health screening. Prerequisite: Students may enroll in Internship only after successful completion of at least three courses in the Pre-Law Pathway.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461096 - Co-op (Public Services/Protective Services)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Cooperative Education program receive compensation for their work. Work-based learning is designed to complement the classroom instruction. Students will be required to follow program and agency requirements for attendance and health screenings. Prerequisite: Students may enroll in Co-op only after successful completion of at least three courses in the pathway.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461097 - Co-op (Pre-Law)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Cooperative Education program receive compensation for their work. Work-based learning is designed to complement the classroom instruction. Students will be required to follow program and agency requirements for attendance and health screenings. Prerequisite: Students may enroll in Co-op only after successful completion of at least three courses in the Pre-Law Pathway.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461098 - Special Topics--Pre-Law

Grade Level: 11 - 12
Credits: 1
Description: Special Topics is an expanded course offering the study of current law and public safety issues. Topics may vary at the discretion of the instructor. Prerequisite: Students may enroll in Special Topics only after successful completion of at least three courses in the Pre-Law Pathway.
Content: Law Enforcement
Population: General

410	Law Enforcement
440	Homeland Security
AJLW	Adjunct Instructor for Law Enforcement
X410	Emergency Certificate For Teaching Law Enforcement

461099 - Special Topics - Public Services/Protective Services

Grade Level: 11 - 12
Credits: 1

Description: Special Topics is an expanded course offering the study of current law and public safety issues. Topics may vary at the discretion of the instructor. Prerequisite: Students may enroll in Special Topics only after successful completion of at least three courses in the pathway.
Content: Emergency Services
Population: General

410	Law Enforcement
420	Fire Service Technology
430	Emergency Medical Services
440	Homeland Security

Industrial Education - Industrial Electronics Technology (470100)

470101 - Digital I

Grade Level: 10 - 12
Credits: 0.5
Description: Introduces digital logic methods. Topics include: Boolean algebra, combinational logic theory, sequential circuits, number systems and codes, and design and troubleshooting of digital logic circuits.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470102 - Digital I Lab

Grade Level: 10 - 12
Credits: 0.5
Description: Application of digital logic methods. Topics include: Boolean algebra, combinational logic theory, sequential circuits, number systems and codes, and design and troubleshooting of digital logic circuits.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470115 - Devices and Circuits I

Grade Level: 9 - 12
Credits: 1
Description: This course combines theory and application in the study of semiconductor devices including: diodes, Zener diodes, bipolar junction transistors, field effect transistors, and circuits involved.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470116 - Digital Electronics

Grade Level: 9 - 12
Credits: 1

Description: Develops an understanding of fundamental digital principles including logic gates, Boolean algebra, flip-flops, register, combinational and sequential logic circuits and basic digital design techniques.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470117 - DC Circuits

Grade Level: 9 - 12
Credits: 1
Description: Introduces the theory of electricity and magnetism, and the relationship of voltage, current, resistance, and power in electrical circuits. Circuit analysis techniques are stressed. DC circuits are analyzed using Ohm's Law, Kirchoff's Laws, and various network theorems.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470118 - AC Circuits

Grade Level: 9 - 12
Credits: 1
Description: The Alternating Current (AC) Circuits course is designed to develop an understanding of alternating current fundamentals and theory with emphasis on the study of reactance, resonance, RC, RL, RLC, transformers, phase angles and power factors. Students will apply formulas to analyze the operation of AC circuits.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470119 - Devices and Circuits II

Grade Level: 9 - 12
Credits: 1
Description: Combines theory and applications in the study of operational amplifiers, oscillators, basic modulation circuitry, linear integrated circuits, thyristors, and regulated/switching power supplies.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470120 - Devices I Lab

Grade Level: 10 - 12
Credits: 0.5

Description: Basic application of semi-conductor devices. Emphasis is on design, construction and troubleshooting of diode and transistor circuits, amplifiers and power supplies.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470125 - Devices II

Grade Level: 10 - 12
Credits: 0.5
Description: Emphasis is on thyristors, FETs, integrated circuits, and other devices as applied to audio frequency amplifiers, feedback circuits, modulators, detectors, and other basic electronic circuits.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470126 - Devices II Lab A

Grade Level: 10 - 12
Credits: 0.5
Description: Applies basic knowledge of thyristors, FETs, integrated circuits, and other devices as applied to audio frequency amplifiers, feedback circuits, modulators, detectors, and other basic electronic circuits.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470127 - Devices II Lab B

Grade Level: 10 - 12
Credits: 0.5
Description: Advanced application of theory related to thyristors, FETs, integrated circuits, and other devices as applied to audio frequency amplifiers, feedback circuits, modulators, detectors, and other basic electronic circuits.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470130 - Digital II

Grade Level: 10 - 12
Credits: 0.5
Description: Advanced digital logic methods. Topics include: small and medium scale integrated circuit logic families, interfacing techniques, arithmetic circuitry, programmable devices, and an introduction to

microprocessors.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470131 - Digital II Lab

Grade Level: 10 - 12
Credits: 0.5
Description: Application of advanced digital logic methods. Topics include: small and medium scale integrated circuits logic families, interfacing techniques, arithmetic circuitry, programmable devices, and an introduction to microprocessors.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470132 - Robotics and Industrial Automation

Grade Level: 10 - 12
Credits: 0.5
Description: Introduction to the theory of robots including terminology, components, and basic programming. Provides theory of serve and non-servo robots. Topics include robot types, controllers, manipulators, basic robotic programming, and fluid power systems. Provides basic theory of flexible and computer-integrated manufacturing and control systems.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470133 - Robotics and Industrial Automation Lab A

Grade Level: 10 - 12
Credits: 0.5
Description: This is a lab course to accompany ENGT 260.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470134 - Robotics and Industrial Automation Lab B

Grade Level: 10 - 12
Credits: 0.5
Description: This is a lab course to accompany ENGT 260.

Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470135 - Co-op I (Electronics)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470138 - Internship (Electronics)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

470199 - Special Topics - Industrial Electronics

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Industrial Education - Industrial Electronics but not described in the above courses.
Content: Industrial Electronics Technology
Population: General

733	Electronics
771	Electronics
AJET	Adjunct Instructor For Electronics.

Industrial Education - Industrial Maintenance Technology (470300)

470301 - Shop Management

Grade Level: 10 - 12
Credits: 0.5
Description: Introduces the basic principles of sound and efficient shop management. Inventory control, fiscal management, and customer relations are emphasized.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470305 - Co-op I (Ind Maint)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470308 - Internship (Ind Maint)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).

Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470311 - Applied Machining I

Grade Level: 9 - 12
Credits: 1
Description: Consists of intermediate level skills using machining machines and surface grinders. It will include the selection of grinding wheels. Applications in milling, lathe, benchwork, and utilizing gauge blocks and the sine bar are covered in this course. Surface grinding and abrasives are introduced and properties of metals are discussed.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470312 - Applied Machining II

Grade Level: 9 - 12
Credits: 1
Description: Carries the student to higher levels in the operation of machine tools. Applications in milling, lathe, benchwork, and utilizing gauge blocks and the sine bar are covered in this course. Surface grinding and abrasives are introduced, and properties of metals are discussed.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470313 - Fundamentals of Machine Tools-A (For Maintenance)

Grade Level: 9 - 12
Credits: 1/2 - 1
Description: This course provides the basic principles needed for a solid foundation in machine tool technology. Areas and machines covered include shop safety, benchwork, drill press, power saw, measurement, mills, and lathes.
Content: Machine Tool Technology for Maintenance
Population: General

776	Machine Tool Technology
792	Industrial Machine Maintenance
799	Power Technology
983	Manufacturing Technology

470314 - Fundamentals of Machine Tools-B (For Maintenance)

Grade Level: 9 - 12
Credits: 1/2 - 1
Description: This course provides intermediate skill development in machine tool technology. The course builds on basic skills developed in MTT 110, especially in the calculation of safe cutting speed and feed rates for the drill press, power saw, mills, and lathes. Shop safety, benchwork, and precision measurement are also emphasized.
Content: Machine Tool Technology for Maintenance
Population: General

776	Machine Tool Technology
792	Industrial Machine Maintenance
799	Power Technology
983	Manufacturing Technology

470316 - Advanced Hydraulic Systems

Grade Level: 11 - 12
Credits: 1
Description: The advanced hydraulic systems class will cover design, repair, and troubleshooting of hydraulic systems.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470318 - Maintaining Industrial Equipment I

Grade Level: 9 - 12
Credits: 1
Description: This course is designed to introduce the student to maintenance techniques and procedures used to maintain industrial equipment.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470321 - Fluid Power

Grade Level: 10 - 12
Credits: 1
Description: This course is a study of fluid power theory, component identification and application, schematic reading, and basic calculations related to pneumatic and hydraulic systems and their operations.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470322 - Industrial Maintenance Electrical Principles

Grade Level: 10 - 12
Credits: 1
Description: This course introduces the theory of electricity and magnetism and the relationship of voltage, current, resistance, and power in electrical circuits. The course is designed to develop an understanding of alternating and direct current fundamentals. Students will apply formulas to analyze the operation of AC and DC circuits.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470326 - Advanced Pneumatic Systems

Grade Level: 11 - 12
Credits: 1
Description: Design, repair, and troubleshooting of pneumatic systems will be covered in this course. Lecture.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470328 - Welding for Maintenance

Grade Level: 9 - 12
Credits: 1
Description: This course will provide basic instruction needed for student to weld using SMAW, MIG, TIG and Oxy-Fuel.
Content: Welding for Maintenance
Population: General

788	Welding
792	Industrial Machine Maintenance
799	Power Technology
983	Manufacturing Technology

470330 - Industrial Maintenance of PLC's

Grade Level: 11 - 12
Credits: 1
Description: This course includes the theory of Programmable Logic Controllers to include installation, programming, interfacing, and troubleshooting PLC's.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470336 - Special Topics - Industrial Maintenance Technology

Grade Level: 9 - 12
Credits: 1/2 - 1
Description: Instruction related to Industrial Education - Industrial Maintenance Technology but not described in the above courses.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470348 - Industrial Maintenance Electrical Motor Controls

Grade Level: 11 - 12
Credits: 1
Description: This course addresses the diversity of electric motor control devices and applications used in industry today with safety and electrical lockouts included.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology

805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470349 - Refrigeration Fundamentals (For Maintenance)

Grade Level: 9 - 12
Credits: 1
Description: Introduces the fundamentals of refrigeration, refrigeration terms, and the basic refrigeration cycle. Proper use of tools, test equipment, and materials is stressed. Environmental issues including refrigerant handling are discussed. Refrigerant piping and methods used to join them are taught. General and specific safety is emphasized.
Content: HVAC for Maintenance
Population: General

760	Air Conditioning & Heating
792	Industrial Machine Maintenance
799	Power Technology
983	Manufacturing Technology

470351 - Robotics and Automation (For Maintenance)

Grade Level: 11 - 12
Credits: 1
Description: Introduction to the theory of robots including terminology, components, and basic programming. Provides theory of serve and non-servo robots. Topics include robot types, controllers, manipulators, basic robotic programming, and fluid power systems. Provides basic theory of flexible and computer-integrated manufacturing and control systems.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

470354 - Shielded Metal Arc Welding (For Maintenance)

Grade Level: 9 - 12
Credits: 1
Description: Teaches students the identification, inspection, and maintenance of SMAW electrodes; principles of SMAW; the effects of variables on the SMAW process to weld plate and pipe; and metallurgy.
Content: Welding for Maintenance
Population: General

788	Welding
792	Industrial Machine Maintenance
799	Power Technology
983	Manufacturing Technology

470358 - Electrical Components (Ind. Maint.)

Grade Level: 10 - 12
Credits: 1
Description: This course defines the electrical components of an air conditioning system. Different types of line voltages, wiring diagrams, and solid-state devices are included. Safety is emphasized.
Content: HVAC for Maintenance
Population: General

760	Air Conditioning & Heating
792	Industrial Machine Maintenance
799	Power Technology
983	Manufacturing Technology

470360 - Applied Machining I (for Industrial Maint.)

Grade Level: 11 - 12
Credits: 1
Description: This course consists of intermediate level skills using machining machines and surface grinders. It will include the selection of grinding wheels. Applications in milling, lathe, benchwork, and utilizing gauge blocks and the sine bar are covered in this course. Surface grinding and abrasives are introduced and properties of metals are discussed.
Content: Machine Tool Technology for Maintenance
Population: General

776	Machine Tool Technology
792	Industrial Machine Maintenance
799	Power Technology
983	Manufacturing Technology

470361 - Cooling and Humidification (for Industrial Maint.)

Grade Level: 11 - 12
Credits: 1
Description: Explains the working characteristics of air conditioning units with air and water cooled condensers. Line, low voltage and pneumatic controls will also be covered. ARI - Air Conditioning Systems: Subtopics A-E; System Installation and Start-Up: Subtopic D; System Servicing and Troubleshooting: Subtopic D; Controls: Subtopic D.
Content: HVAC for Maintenance
Population: General

760	Air Conditioning & Heating
792	Industrial Machine Maintenance
799	Power Technology
983	Manufacturing Technology

470363 - Heating and Humidification (for Industrial Maint.)

Grade Level: 11 - 12
Credits: 1
Description: Explains heating systems from simple fossil fuel furnaces through more complex systems. This course will also concentrate on the line and control voltage circuitry pertaining to these systems. ARI Controls: Subtopics A-C; Heating Systems: Subtopics A-C; System Installation and Start-Up: Subtopics A and B; System Servicing and Troubleshooting: Subtopic C; Tools and Equipment: Subtopic D
Content: HVAC for Maintenance
Population: General

760	Air Conditioning & Heating
792	Industrial Machine Maintenance

799	Power Technology
983	Manufacturing Technology

470365 - HVAC Electricity (for Industrial Maint.)

Grade Level: 10 - 12
Credits: 1
Description: This course defines the electrical components of an air conditioning system. Different types of line voltages, wiring diagrams, and solid-state devices are included. Safety is emphasized.
Content: HVAC for Maintenance
Population: General

760	Air Conditioning & Heating
792	Industrial Machine Maintenance
799	Power Technology
983	Manufacturing Technology

470367 - Gas Metal Welding (Ind. Maint.)

Grade Level: 9 - 12
Credits: 1
Description: This course is designed to teach students the identification, inspection, and maintenance of GMAW machines; identification, selection and storage of GMAW electrodes; principles of GMAW; and the effects of variables on the GMAW process. Theory and applications of related processes such as FCAW and SAW and metallurgy are also included.
Content: Welding for Maintenance
Population: General

788	Welding
792	Industrial Machine Maintenance
799	Power Technology
983	Manufacturing Technology

Industrial Education - Diesel Technology
(470400)

470403 - Preventive Maintenance Lab

Grade Level: 10 - 12
Credits: 0.5
Description: This course provides the student with instruction on preventive maintenance practices, scheduled procedures, documents, DOT-required record system, and determining the needs for repair. It is assumed that: 1. In all areas, appropriate theory, safety, and support instruction will be required in the performance of each task; 2. This instruction includes identification and use of the appropriate tools and testing and measurement equipment required to accomplish certain tasks; 3. The student has received the necessary training to locate and use current reference and training materials from accepted industry resources (paper and electronic formats).
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470404 - Diesel Technology

Grade Level: 9 - 12
Credits: 1-6
Description: This program focuses on the skills needed to analyze malfunctions and repair, build and maintain construction equipment, farm equipment, or medium and heavy trucks. This program includes climate control, computer fundamentals, mechanical concepts, introduction to diesel engines, and introduction to maintenance welding. Leadership and professionalism will be provided through SkillsUSA and the Professional Development Program.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470405 - Basic Equipment Operation for Mechanics

Grade Level: 10 - 12
Credits: 1
Description: This course is designed to give diesel technology students, who are seeking the construction equipment mechanic track, the basic operation of various types of heavy equipment. This class gives the student the skills needed to operate heavy equipment to the level that allows them to diagnose mechanical and other operational problems of the equipment. *** (This course is a prerequisite for the Construction Equipment Technician diploma program at Hazard Technical College and CVTC - Middlesboro Campus.)

Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470406 - Mechanical Concepts

Grade Level: 10 - 12
Credits: 0.5
Description: This course introduces the student to the basic fundamentals of precision measurement and its application to the industrial setting.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470411 - Commercial and Recreational Small Engine Technology/Marine Technology

Grade Level: 9 - 12
Credits: 1-6
Description: This course will focus on the student's practical information about lawn equipment, light commercial, marine and /or motorcycle engine construction, operation, lubrication, maintenance, troubleshooting, service, rebuilding, and repair. Leadership and professionalism will be developed through SkillsUSA and the Professional Development Program.
Content: Commercial and Recreational Small Engine Technology
Population: General

763	Auto Technology
784	Small Engine Repair
794	Fork Lift Mechanics
797	Commercial and Recreational Small Engine Technology
808	Marine Technology
S763	Approval For Teaching Preparation Level Auto Mechanics
X763	Emergency Certificate For Teaching Auto Mechanics
X797	Emergency Certificate For Teaching Commercial and Recreational Small Engine Technology

470420 - Introduction to Maintenance Welding

Grade Level: 10 - 12
Credits: 0.5
Description: This course provides training in the identification, inspection, and maintenance of welding electrodes. Training will be given in the principles and processes of welding plates and pipes. Instruction will be given in lab safety and basic oxy fuel cutting.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.

X768	Emergency Certificate For Teaching Diesel Technology

470421 - Introduction to Diesel Engines

Grade Level: 9 - 12
Credits: 1
Description: This course introduces the fundamental concepts of the operation of two- and four-stroke diesel and gasoline engines. Topics included are basic engine components and their functions, engine performance terminology, two-and four-stroke operation, combustion principles, and engine disassembly with basic hand tools.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470422 - Brakes

Grade Level: 10 - 12
Credits: 1
Description: This course introduces the theory and operation of air and hydraulic braking systems. This will include components such as: air and hydraulic actuators, air brake chambers, disc drums, linings, and brake adjustments. It is assumed that: 1. In all areas, appropriate theory, safety, and support instruction will be required in the performance of each task; 2. This instruction includes identification and use of the appropriate tools and testing and measurement equipment required to accomplish certain tasks; 3. The student has received the necessary training to locate and use current reference and training materials from accepted industry resources (paper and electronic formats).
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470423 - Diesel Engine Repair

Grade Level: 9 - 12
Credits: 1
Description: This course provides a series of lectures and demonstrations on the fundamentals of engine repair, troubleshooting, and engine operation and maintenance.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470424 - Steering and Suspension (Diesel)

Grade Level: 9 - 12
Credits: 1

Description: The theory and operation of steering and suspension systems are presented including manual steering, power steering, springs and supports, steering linkage and alignment.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470425 - Electrical System for Diesel Equipment

Grade Level: 9 - 12
Credits: 1
Description: This course introduces the student to the principles, theories, and concepts of the automotive electrical system that include the unique diagramming, coding and locating of wiring, and component devices.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470426 - Hydraulics (Diesel)

Grade Level: 10 - 12
Credits: 1
Description: This course introduces the theory and operation of a complete hydraulic system including all components. Components include: fluids, piping, reservoirs, actuators, directional valves, servo valves, pressure control valves, pumps, complete hydraulic circuits and accessories. It is assumed that: 1. In all areas, appropriate theory, safety, and support instruction will be required in the performance of each task; 2. This instruction includes identification and use of the appropriate tools and testing and measurement equipment required to accomplish certain tasks; 3. The student has received the necessary training to locate and use current reference and training materials from accepted industry resources (paper and electronic formats).
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470427 - Power Train (Diesel)

Grade Level: 10 - 12
Credits: 1
Description: This course emphasizes the theory and principles of the power train systems. Students learn to diagnose and repair components, such as: clutches, drive lines, propeller shafts, differentials, and final drives. It is assumed that: 1. In all areas, appropriate theory, safety, and support instruction will be required in the performance of each task; 2. This instruction includes identification and use of the appropriate tools and testing and measurement equipment required to accomplish certain tasks; 3. The student has received the necessary training to locate and use current reference and training materials from accepted industry resources (paper and electronic formats).

Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470428 - Powertrain for Construction Equipment

Grade Level: 10 - 12
Credits: 0.5
Description: Students learn the theory and principles of the operation of power transmissions. They learn to diagnose and repair power train units including torque connectors, standard and automatic transmissions.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470429 - Undercarriage

Grade Level: 10 - 12
Credits: 0.5
Description: Students learn the theory and operation of undercarriage systems and their components. These components include endless track, roller track, roller frames, idlers, roller supports, and mainframes.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470432 - Introduction to Maintenance Welding Lab

Grade Level: 10 - 12
Credits: 0.5
Description: This course provides laboratory experiences in which students acquire the manipulative skills needed to weld surface, fillet, and groove welds in flat and horizontal positions. The studies will perform oxy fuel cutting operations.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470433 - Undercarriage Lab

Grade Level: 10 - 12
Credits: 0.5

Description: This course provides opportunities to troubleshoot and repair some parts of undercarriage systems and their components. These components include endless track, roller track, roller frames, idlers, roller supports, and mainframes.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470436 - Powertrain for Construction Equipment Lab

Grade Level: 10 - 12
Credits: 0.5
Description: Students troubleshoot, disassemble, evaluate parts, and reassemble components of a power train system, such as torque connectors, standard and automatic transmissions, and drive lines.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470438 - Climate Control (Diesel)

Grade Level: 10 - 12
Credits: 1
Description: This course introduces the theory and operation of heating and air conditioning systems. Air conditioning terminology and how to service and troubleshoot mechanical and electrical circuits of heating and air conditioning systems as emphasized. It is assumed that: 1. In all areas, appropriate theory, safety, and support instruction will be required in the performance of each task 2. This instruction includes identification and use of the appropriate tools and testing and measurement equipment required to accomplish certain tasks; 3. The student has received the necessary training to locate and use current reference and training materials from accepted industry resources (paper and electronic formats).
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470442 - Co-op I (Diesel)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics

AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470445 - Diesel/Medium Heavy Truck Internship I

Grade Level: 11 - 12
Credits: 1
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470477 - Special Problems I (Diesel)

Grade Level: 10 - 12
Credits: 0.5
Description: Courses designed to enhance a student’s understanding of shop situations and problems that arise when dealing with live work. It expands on the task lists that have already been taught in previous Diesel/Medium Heavy Duty Truck Courses. The instructor will teach students how to deal with real world problems that arise when repairing vehicles subjected to various types of customer road use.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470478 - Special Problems II (Diesel)

Grade Level: 10 - 12
Credits: 1
Description: Courses designed to enhance a student’s understanding of shop situations and problems that arise when dealing with live work. It expands on the task lists that have already been taught in previous Diesel/Medium Heavy Duty Truck Courses. The instructor will teach students how to deal with real world problems that arise when repairing vehicles subjected to various types of customer road use.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470479 - Special Problems III (Diesel)

Grade Level: 10 - 12
Credits: 1
Description: Courses designed to enhance a student's understanding of shop situations and problems that arise when dealing with live work. It expands on the task lists that have already been taught in previous Diesel/Medium Heavy Duty Truck Courses. The instructor will teach students how to deal with real world problems that arise when repairing vehicles subjected to various types of customer road use.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

470499 - Special Topics - Diesel Technology

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Industrial Education - Diesel Technology but not described in the above courses.
Content: Diesel Technology
Population: General

768	Diesel Technology
786	Truck Mechanics
AJDT	Adjunct Instructor For Diesel Technology.
X768	Emergency Certificate For Teaching Diesel Technology

Industrial Education - Automotive Technology
(470500)

470501 - Co-op I (Auto)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470504 - Automotive Internship I

Grade Level: 11 - 12
Credits: 1
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470507 - Automotive Maintenance & Light Repair Section A

Grade Level: 10 - 12
Credits: 1
Description: These courses introduce the student to the principles, theories, and concepts of Automotive Technology, and include instruction in the maintenance and light repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task, including proper care and cleaning of customers vehicles. The instruction will also include identification and use of appropriate tools and

testing/measurement equipment required to accomplish certain tasks. The student will also receive the necessary training to locate and use current reference and training materials from accepted industry publications and resources, and demonstrate the ability to write work orders.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470509 - Automotive Maintenance & Light Repair Section B

Grade Level: 10 - 12
Credits: 1
Description: These courses introduce the student to the principles, theories, and concepts of Automotive Technology, and include instruction in the maintenance and light repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task, including proper care and cleaning of customers vehicles. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also receive the necessary training to locate and use current reference and training materials from accepted industry publications and resources, and demonstrate the ability to write work orders.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470511 - Automotive Maintenance & Light Repair Section C

Grade Level: 10 - 12
Credits: 1
Description: These courses introduce the student to the principles, theories, and concepts of Automotive Technology, and include instruction in the maintenance and light repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task, including proper care and cleaning of customers vehicles. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also receive the necessary training to locate and use current reference and training materials from accepted industry publications and resources, and demonstrate the ability to write work orders.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470513 - Automotive Maintenance & Light Repair Section D

Grade Level: 10 - 12
Credits: 1
Description: These courses introduce the student to the principles, theories, and concepts of Automotive Technology, and include instruction in the maintenance and light repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task, including proper care and cleaning of customers vehicles. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also receive the necessary training to locate and use current reference and training materials from accepted industry publications and resources, and demonstrate the ability to write work orders.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470515 - Automobile Service Technology Section A

Grade Level: 10 - 12
Credits: 1
Description: These courses present the theory, component identification, operation, diagnosis, and the service and repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also locate and use current reference and training materials from accepted industry publications and resources, and write industry standard work orders.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470517 - Automobile Service Technology Section B

Grade Level: 10 - 12
Credits: 1
Description: These courses present the theory, component identification, operation, diagnosis, and the service and repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also locate and use current reference and training materials from accepted industry publications and resources, and write industry standard work orders.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body

X763	Emergency Certificate For Teaching Auto Mechanics

470519 - Automobile Service Technology Section C

Grade Level: 10 - 12
Credits: 1
Description: These courses present the theory, component identification, operation, diagnosis, and the service and repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also locate and use current reference and training materials from accepted industry publications and resources, and write industry standard work orders.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470521 - Automobile Service Technology Section D

Grade Level: 10 - 12
Credits: 1
Description: These courses present the theory, component identification, operation, diagnosis, and the service and repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also locate and use current reference and training materials from accepted industry publications and resources, and write industry standard work orders.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470523 - Master Automobile Service Technology Section A

Grade Level: 10 - 12
Credits: 1
Description: This advanced automotive course presents the theory, component identification, operation, diagnosis, and the service and repair of Engines and Engine Systems, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also locate and use current reference and training materials from accepted industry publications and resources, and write industry standard work orders which include information regarding problem resolution and the results of the work performed. NOTE: Master Automobile Service Technology Section A is NOT a pre-requisite for Master Automobile Service Technology Section B. Either section can be taken first. The necessary pre-requisites for the Master Automobile Service Technology Courses are all sections of the Automotive Maintenance and Light

Repair Courses, and all sections of the Automobile Service Technology Courses.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470525 - Master Automobile Service Technology Section B

Grade Level: 12 - 12
Credits: 1
Description: This advanced automotive course presents the theory, component identification, operation, diagnosis, and the service and repair of Engines and Engine Systems, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also locate and use current reference and training materials from accepted industry publications and resources, and write industry standard work orders which include information regarding problem resolution and the results of the work performed. NOTE: Master Automobile Service Technology Section A is NOT a pre-requisite for Master Automobile Service Technology Section B. Either section can be taken first. The necessary pre-requisites for the Master Automobile Service Technology Courses are all sections of the Automotive Maintenance and Light Repair Courses, and all sections of the Automobile Service Technology Courses.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470527 - Light Vehicle Diesel Engines Section A

Grade Level: 10 - 12
Credits: 1
Description: These courses introduce the student to the principles, theories, and concepts of Light Vehicle Diesel Engines, and include instruction in General Engine Diagnosis, Cylinder Head and Valve Train Diagnosis and Repair, Engine Block Diagnosis and Repair, Lubrication and Cooling Systems Diagnosis and Repair, Air Induction and Exhaust Systems Diagnosis and Repair, and Fuel System Diagnosis and Repair. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task, including proper care of customer's vehicles. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also receive the necessary training to locate and use current reference and training materials from accepted industry publications and resources, and demonstrate the ability to write work orders.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470528 - Light Vehicle Diesel Engines Section B

Grade Level: 10 - 12
Credits: 1
Description: "These courses introduce the student to the principles, theories, and concepts of Light Vehicle Diesel Engines, and include instruction in General Engine Diagnosis, Cylinder Head and Valve Train Diagnosis and Repair, Engine Block Diagnosis and Repair, Lubrication and Cooling Systems Diagnosis and Repair, Air Induction and Exhaust Systems Diagnosis and Repair, and Fuel System Diagnosis and Repair. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task, including proper care of customer's vehicles. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also receive the necessary training to locate and use current reference and training materials from accepted industry publications and resources, and demonstrate the ability to write work orders.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470529 - Light Vehicle Diesel Engines Section C

Grade Level: 10 - 12
Credits: 1
Description: "These courses introduce the student to the principles, theories, and concepts of Light Vehicle Diesel Engines, and include instruction in General Engine Diagnosis, Cylinder Head and Valve Train Diagnosis and Repair, Engine Block Diagnosis and Repair, Lubrication and Cooling Systems Diagnosis and Repair, Air Induction and Exhaust Systems Diagnosis and Repair, and Fuel System Diagnosis and Repair. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task, including proper care of customer's vehicles. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also receive the necessary training to locate and use current reference and training materials from accepted industry publications and resources, and demonstrate the ability to write work orders.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470530 - Light Vehicle Diesel Engines Section D

Grade Level: 10 - 12
Credits: 1
Description: "These courses introduce the student to the principles, theories, and concepts of Light Vehicle Diesel Engines, and include instruction in General Engine Diagnosis, Cylinder Head and Valve Train Diagnosis and Repair, Engine Block Diagnosis and Repair, Lubrication and Cooling Systems Diagnosis and Repair, Air Induction and Exhaust Systems Diagnosis and Repair, and Fuel System Diagnosis and Repair. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task, including proper care of customer's vehicles. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also receive the necessary training to locate and use current reference and training materials from accepted industry publications and resources, and demonstrate the ability to write work orders.

Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470545 - Carburetors and Fuel Systems

Grade Level: 10 - 12
Credits: 1
Description: The student will be able to identify parts of a motorcycle carburetor and discuss the components and operations of various carburetor circuits. The student will also be able to remove, clean, and install a carburetor and remove, clean, and install a fuel valve.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470546 - Precision Measurement

Grade Level: 10 - 12
Credits: 0.5
Description: This class introduces the student to the basic fundamentals of precision measurement and its application in the industrial setting.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470556 - Basic Automotive Electricity

Grade Level: 9 - 12
Credits: 1
Description: This course introduces the student to the principles, theories, and concepts of the automotive electrical system that include the unique diagramming, coding and locating of wiring, and component devices.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470566 - Special Topics - Automotive Technology

Grade Level: 9 - 12
Credits: 1
Description: Instruction related to Industrial Education - Automotive Technology but not described in the above courses.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470577 - Automotive Special Problems I

Grade Level: 11 - 12
Credits: 1
Description: Courses designed to enhance a student's understanding of shop situations and problems that arise when dealing with live work. It expands on the task lists that have already been taught in previous Automotive Technology Courses. The instructor will teach students how to deal with real world problems that arise when repairing vehicles subjected to various types of customer road use.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470578 - Automotive Special Problems II

Grade Level: 11 - 12
Credits: 1
Description: Courses designed to enhance a student's understanding of shop situations and problems that arise when dealing with live work. It expands on the task lists that have already been taught in previous Automotive Technology Courses. The instructor will teach students how to deal with real world problems that arise when repairing vehicles subjected to various types of customer road use.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470579 - Automotive Special Problems III

Grade Level: 11 - 12
Credits: 1
Description: Courses designed to enhance a student's understanding of shop situations and problems that arise when dealing with live work. It expands on the task lists that have already been taught in previous

Automotive Technology Courses. The instructor will teach students how to deal with real world problems that arise when repairing vehicles subjected to various types of customer road use.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

470584 - Automotive Special Problems IV

Grade Level: 11 - 12
Credits: 1
Description: Courses designed to enhance a student's understanding of shop situations and problems that arise when dealing with live work. It expands on the task lists that have already been taught in previous Automotive Technology Courses. The instructor will teach students how to deal with real world problems that arise when repairing vehicles subjected to various types of customer road use.
Content: Automotive Technology
Population: General

763	Auto Technology
793	Auto Parts
S763	Approval For Teaching Preparation Level Auto Mechanics
X762	Emergency Certificate For Teaching Auto Body
X763	Emergency Certificate For Teaching Auto Mechanics

Industrial Education - Auto Body Technology/ Collision Repair and Refinish
(470600)

470601 - Co-op I (Collision Repair)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470604 - Collision Repair Internship I

Grade Level: 11 - 12
Credits: 1
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470620 - Structural Analysis and Damage Repair I

Grade Level: 10 - 12
Credits: 1
Description: This course presents instruction on the analysis, repair and replacement of structural panels on unibody automobiles and body and frame alignment on unibody and frame cars. It will be taught by demonstration and lecture.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470622 - Structural Analysis and Damage Repair II

Grade Level: 11 - 12
Credits: 1
Description: This course presents instruction on the analysis, repair and replacement of structural panels on unibody automobiles and body and frame alignment on unibody and frame cars. It will be taught by demonstration and lecture.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470628 - Damage Analysis, Estimating, and Customer Service

Grade Level: 10 - 12
Credits: 0.5
Description: This course instructs students on how to perform Damage Analysis, Estimating, and providing quality Customer Service. For every task in Damage Analysis, Estimating and Customer Service, the following safety requirement must be strictly enforced: Comply with personal and environmental safety practices associated with clothing and the use of gloves; respiratory protection; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470631 - Introduction to Collision Repair

Grade Level: 9 - 12
Credits: 1/2-1
Description: This course introduces the student to safety, sanding, grinding, pulling, roughing and filling; the use of tools and equipment; and preparing and priming automotive panels through lectures and demonstrations.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470632 - Auto Body Technology/ Collision Repair and Refinish

Grade Level: 9 - 12
Credits: 1-6
Description: This program includes introduction to auto body repair, non-structural analysis and damage repair, structural analysis and damage repair, and painting and refinishing. Leadership and professionalism will be provided through SkillsUSA and the Professional Development Program.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470633 - Non-Structural Damage Repair I

Grade Level: 9 - 12
Credits: 1
Description: This course gives instruction and provides practical experience in replacing and aligning bolts on automotive parts such as doors, hoods, and fenders; as well as instruction on the repair and replacement of non-structural weld-on automotive panels by aligning, welding, cutting, and drilling through demonstrations and lectures. It will be taught by demonstration and hands-on practice. The skills required are most effectively taught and practiced on live work. Due to the unpredictable nature of live work, some tasks may carry over to other courses.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470635 - Plastics and Adhesives

Grade Level: 9 - 12
Credits: 1
Description: This course will be designed for students to satisfactorily complete collision repair tasks or to enhance their skills in the occupational area.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470639 - Painting and Refinishing I

Grade Level: 10 - 12
Credits: 1
Description: This course provides instruction in the use of lacquer, acrylic enamel and base coat/clear coat refinishing products, masking procedures, preparations and paint problems. It will be taught by demonstration and lecture. The skills required are most effectively taught and practiced on live work. Due to the unpredictable nature of live work, some tasks may carry over to other courses.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470640 - Painting and Refinishing II

Grade Level: 10 - 12
Credits: 1
Description: This course provides instruction in the use of lacquer, acrylic enamel and base coat/clear coat refinishing products, masking procedures, preparations and paint problems. It will be taught by demonstration and lecture. The skills required are most effectively taught and practiced on live work. Due to the unpredictable nature of live work, some tasks may carry over to other courses.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470642 - Mechanical and Electrical Components I

Grade Level: 10 - 12
Credits: 1
Description: This course provides instruction in the diagnosis, repair and/or replacement of suspension, steering, electrical, brake, drive train, fuel, exhaust, and restraint systems. It will be taught by demonstration and lecture. The theories and concepts of heating and air conditioning systems will also be discussed and demonstrated. This course provides practical experience in the inspection and repair or replacement of suspension and steering systems. It will be taught by demonstration and hands-on experience. The skills required are most effectively taught and practiced on live work. Due to the unpredictable nature of live work, some tasks may carry over to other courses.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470644 - Non-Structural Damage Repair II

Grade Level: 10 - 12
Credits: 1
Description: This course gives instruction and provides practical experience in replacing and aligning bolts on automotive parts such as doors, hoods, and fenders; as well as instruction on the repair and replacement of non-structural weld-on automotive panels by aligning, welding, cutting, and drilling through demonstrations and lectures.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470645 - Painting and Refinishing III

Grade Level: 10 - 12
Credits: 1
Description: This course provides instruction in the use of lacquer, acrylic enamel and base coat/clear coat refinishing products, masking procedures, preparations and paint problems. It will be taught by demonstration and lecture. The skills required are most effectively taught and practiced on live work. Due to the unpredictable nature of live work, some tasks may carry over to other courses.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470647 - Painting and Refinishing Special Projects

Grade Level: 10 - 12
Credits: 1
Description: This course provides instruction in the use of lacquer, acrylic enamel and base coat/clear coat refinishing products, masking procedures, preparations and paint problems. It will be taught by demonstration and lecture. The skills required are most effectively taught and practiced on live work. due to the unpredictable nature of live work, some tasks may carry over to other courses.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470649 - Non-Structural Analysis and Damage Repair III

Grade Level: 10 - 12
Credits: 1
Description: This course gives instruction and provides practical experience in replacing and aligning bolts on automotive parts such as doors, hoods, and fenders; as well as instruction on the repair and replacement of non-structural weld-on automotive panels by aligning, welding, cutting, and drilling through demonstrations and lectures. It will be taught by demonstration and hands-on practice. The skills required are most effectively taught and practiced on live work. Due to the unpredictable nature of live work, some tasks ay carry over to other courses.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470651 - Non-Structural Analysis and Damage Repair Special Projects

Grade Level: 10 - 12
Credits: 1
Description: This course gives instruction and provides practical experience in replacing and aligning bolts on automotive parts such as doors, hoods, and fenders; as well as instruction on the repair and replacement of non-structural weld-on automotive panels by aligning, welding, cutting and drilling through demonstrations and lectures. It will be taught by demonstration and hands-on practice. The skills required are most effectively taught and practiced on live work. Due to the unpredictable nature of live work, some tasks may carry over to other courses.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470652 - Non-Structural analysis and Damage Repair Special Projects Lab

Grade Level: 10 - 12
Credits: 1
Description: This course provides practical experience in replacing and alignment of bolts on automotive parts such as doors, hoods, and fenders. It will be taught by demonstration and hands-on practice. The skills required are most effectively taught and practiced on live work. Due to the unpredictable nature of live work, some tasks may carry over to other courses.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470653 - Mechanical and Electrical Components II

Grade Level: 11 - 12
Credits: 1
Description: This course provides instruction in the diagnosis, repair and/or replacement of suspension, steering, electrical, brake, drive train, fuel, exhaust, and restraint systems. It will be taught by demonstration and lecture. The theories and concepts of heating and air conditioning systems will also be discussed and demonstrated. This course provides practical experience in the inspection and repair or replacement of suspension and steering systems. It will be taught by demonstration and hands-on experience. The skills required are most effectively taught and practiced on live work. Due to the unpredictable nature of live work, some tasks may carry over to other courses.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470677 - Special Projects I (Collision Repair)

Grade Level: 10 - 12
Credits: 0.5
Description: This course will be designed for students to satisfactorily complete collision repair tasks or to enhance their skills in the occupational area.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470678 - Special Projects II (Collision Repair)

Grade Level: 10 - 12
Credits: 1
Description: This course will be designed for students to satisfactorily complete collision repair tasks to enhance their skills in the occupational area.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470679 - Special Projects III (Collision Repair)

Grade Level: 10 - 12
Credits: 1
Description: This course will be designed for students to satisfactorily complete collision tasks to enhance their skills in the occupational area.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

470699 - Special Topics - Auto Body Repair

Grade Level: 9 - 12
Credits: .5-1

Description: Instruction related to Industrial Education - Auto Body Repair but not described in the above courses.
Content: Collision Repair and Refinish Technology
Population: General

762	Auto Body Repairs
X762	Emergency Certificate For Teaching Auto Body

Industrial Education - Aviation Technology
(470700)

470704 - Aviation Technology

Grade Level: 9 - 12
Credits: 1-6
Description: Instruction in aviation careers, aviation history, air traffic control, aircraft maintenance, aerodynamics and flight is the basis for this program. Knowledge of various aircraft systems, maintenance practices, and flight principles are used to develop skills in troubleshooting, and problem solving. Leadership and professionalism will be provided through SkillsUSA and the Professional Development Program.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470705 - Flight

Grade Level: 9 - 12
Credits: 1-6
Description: The theory and operation of aviation flight.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470710 - Aviation Math

Grade Level: 10 - 12
Credits: 0.25
Description: This course provides instruction in general math and calculations used in maintenance and repair of aircraft and aircraft power plants. It will be taught by lecture, demonstrations, worksheets, and reading assignments
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology

AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470711 - Blue Print Reading & Drawing

Grade Level: 10 - 12
Credits: 0.25
Description: This course provides instruction in reading and interpretation of basic industrial and aircraft blueprints. It is taught by lecture, demonstration, worksheets, reading assignments, and projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470712 - Physics

Grade Level: 10 - 12
Credits: 0.25
Description: Provides instruction in basic principles of physics as related to aviation maintenance. This is taught by lecture, demonstration, worksheets, reading assignments and projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470713 - Aircraft Maintenance I

Grade Level: 11 - 12
Credits: 1
Description: This course provides instruction in the use of aircraft maintenance publications, use and completion of required forms and records, and aircraft mechanic privileges and limitations.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470714 - Aircraft Maintenance II

Grade Level: 11 - 12
Credits: 1
Description: This course provides instruction in the identification, cause, prevention, removal, and treatment of corrosion. It also includes interior and exterior cleaning of the aircraft.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470720 - Aircraft Non-Metallic Structures

Grade Level: 10 - 12
Credits: 1
Description: This course provides instruction in the inspection, testing, repair, selection, and installation of aircraft fabric covering: the identification, application, and inspection of aircraft finishing materials. It also covers inspection, service, and repair of metal and composite aircraft structures, including laminated and honeycomb structures, plastic materials, interior furnishings, and access openings.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470721 - Sheet Metal Aircraft Structures

Grade Level: 10 - 12
Credits: 1
Description: This course covers the principles of sheet metal layout, bending, rivet installation, structural inspection, materials and fasteners, and repair methods.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470722 - Aircraft Wood & Welding

Grade Level: 10 - 12
Credits: 1
Description: This course provides instruction in the inspection and repair of welded aircraft assemblies and structures as well as the repair of wood structures.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470723 - Assembly, Rigging & Inspection

Grade Level: 10 - 12
Credits: 1
Description: This course covers the methods and techniques used in the assembly of subunits and major components of the airframe. It also covers the rigging of primary, secondary, and auxiliary control surfaces; theory of flight; and jacking of aircraft, in addition to inspection of airframes to determine airworthiness.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470724 - Aircraft Environment & Fuel Systems

Grade Level: 10 - 12
Credits: 1
Description: This course covers instruction on checking, inspection, servicing, repair, and troubleshooting of the heating, cooling, air conditioning, pressurization, and oxygen systems; rain and ice control and removal systems; and fire detection and extinguishing systems.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470725 - Aircraft Utility Sys & Basic Electricity

Grade Level: 10 - 12
Credits: 1
Description: This course provides instruction in inspecting, checking, troubleshooting and repair of heading, speed, altitude, time, attitude, temperature, pressure and position indicating systems, and installation of instruments. It also includes inspection, checking and servicing of speed and take-off warning systems, electrical brake controls, antiskid systems, auto pilot, and navigation and communication systems.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics

X806	Emergency Certificate For Teaching Aviation Technology

470726 - Hydraulic, Pneumatic & Landing Gear

Grade Level: 10 - 12
Credits: 1
Description: Repair hydraulic and pneumatic power systems components; identify and select hydraulic fluids; and inspect, check, service, troubleshoot, and repair hydraulic and pneumatic power systems. Inspect, check, service and repair landing gear, retraction systems, shock struts, brakes, wheels, tires, and steering system. Instruction provided by lecture, demonstration, and practical projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470727 - Aircraft Electrical Systems

Grade Level: 10 - 12
Credits: 1
Description: This course includes checking, inspecting, troubleshooting, and repair of aircraft electrical system and system components. Instruction is provided by lecture, demonstration, and practical projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470728 - Turbine Engines & Theory

Grade Level: 10 - 12
Credits: 1
Description: This course covers the construction, repair, and overhaul of turbine engines.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470729 - Turbine Operation & Inspection

Grade Level: 10 - 12
Credits: 1

Description: This course includes the operation and inspection of turbine engines.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470730 - Reciprocating Engine Overhaul

Grade Level: 10 - 12
Credits: 1
Description: This course covers inspection, checking, servicing, and repair of opposed and radial engines and reciprocating engine installation. It will be taught by lecture, demonstration, student feed-back, and participation.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470731 - Recip Eng Theory, Operations & Inspection

Grade Level: 10 - 12
Credits: 1
Description: This course covers theory and development of the aircraft internal combustion engine, in addition to instruction in the use of engine construction and repair. It also includes powerplant conformity and airworthiness inspections.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470732 - Engine Fuel Systems & Components

Grade Level: 10 - 12
Credits: 1
Description:
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation

S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470733 - Fuel Metering Systems

Grade Level: 10 - 12
Credits: 1
Description: This course covers the operation, inspection, service, and repair of fuel metering systems by lecture, reading assignments, worksheets, demonstrations, and practical projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470734 - Engine Induction Systems

Grade Level: 10 - 12
Credits: 1
Description: This course covers inspection, checking, troubleshooting, servicing, and repair of engine ice and rain control systems, heat exchangers, superchargers, carburetor air intake, and induction manifolds by lecture, reading assignments, worksheets, demonstration, and practical projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470735 - Propeller Systems & Components

Grade Level: 10 - 12
Credits: 0.5
Description: The student will inspect, check, service, and repair propeller synchronizing and ice control systems; identify and select propeller lubricants; balance propellers; repair propeller control system components. Inspect, check, service, and repair fixed-pitch, constant-speed, and feathering propellers and propeller governing systems and to install, troubleshoot, and remove propellers. Instruction provided by lecture, reading assignments, worksheets, demonstration, and practical projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470736 - Engine Instrument Systems

Grade Level: 10 - 12
Credits: 1
Description: This course covers troubleshooting, servicing and repair of fluid rate-of-flow indicating systems, and repair of engine temperature, pressure, and r.p.m. indicating systems by lecture, reading assignments, worksheets, demonstration, and practical projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470737 - Engine Exhaust Systems

Grade Level: 10 - 12
Credits: 0.5
Description: This course covers inspection and repair of engine exhaust system components by lecture, reading assignments, demonstration, and practical projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470738 - Aviation Maintenance Regulations

Grade Level: 10 - 12
Credits: 0.25
Description: This course provides instruction in the use of aircraft maintenance publications, use and completion of required forms and records, and aircraft mechanic privileges and limitations
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470739 - Aircraft Cleaning & Corrosion Control

Grade Level: 10 - 12
Credits: 0.25
Description: This course provides instruction in the identification, cause, prevention, removal and treatment of corrosion. It also includes interior and exterior cleaning of the aircraft.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic

803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470740 - Ground Handling & Servicing

Grade Level: 10 - 12
Credits: 0.25
Description: Basic handling and ground service techniques of the aircraft taught by lecture, demonstration, worksheets, reading assignments, and projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470741 - Fluid Lines & Fittings

Grade Level: 10 - 12
Credits: 0.25
Description: This course teaches basic hydraulic functions, the fabrication of tubing and flex hoses, as well as seal compatibility. This is taught by lectures, demonstrations, worksheets, reading assignments, and projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470742 - Aircraft Weight & Balance

Grade Level: 10 - 12
Credits: 0.25
Description: This course teaches knowledge and skills necessary in measuring, calculating, and documenting aircraft weight and balance.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470743 - Engine Fire Protection Systems

Grade Level: 10 - 12
Credits: 1
Description: This course covers inspecting, checking, servicing, troubleshooting, and repair of engine fire detection systems by lecture, reading assignments, worksheets, demonstration, and practical projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470744 - Engine Cooling Systems

Grade Level: 10 - 12
Credits: 1
Description: This course covers inspection and repair of engine cooling system components by lecture, reading assignments, worksheets, demonstration, and practical projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470745 - Lubrication Systems & Components

Grade Level: 10 - 12
Credits: 1
Description: This course covers purpose, use, and selection of lubricants; repair engine lubrication system components; inspect, check, service, troubleshoot and repair engine lubrication systems taught by lecture, reading assignments, worksheets, demonstration, and practical projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470746 - Engine Electrical Systems

Grade Level: 10 - 12
Credits: 1
Description: This course covers repair of engine electrical system components, and instruction on how to install, check, and service engine electrical wiring, controls, switches, indicators, and protective devices by lecture, reading assignments, demonstration, and practical projects.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470747 - Engine Ignition Systems

Grade Level: 10 - 12
Credits: 1
Description: This course teaches students how to operate and overhaul magneto and ignition harness; repair engine ignition system components; inspect, check, service, troubleshoot, and repair reciprocating and turbine engine ignition systems by lecture, reading assignments, worksheets, demonstration, and practical projects
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470771 - Maintenance A&P

Grade Level: 9 - 12
Credits: 1-6
Description: The theory and operation of aviation maintenance.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

470799 - Special Topics - Aviation Technology

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Industrial Education - Aviation Technology but not described in the above courses.
Content: Aviation Technology
Population: General

791	Air Craft Mechanic
803	Airframe And Power Plant Mechanics
806	Aviation Technology
AJAV	Adjunct Instructor for Aviation
S791	Approval For Teaching Preparation Level Aircraft Mechanics
X806	Emergency Certificate For Teaching Aviation Technology

Industrial Education - Small Engines/Motorcycle Technology (470800)

470818 - Fundamentals of Mathematics

Grade Level: 9 - 12
Credits: 1
Description: This course concentrates on basic math and is designed to assist the student in mastering and applying math skills in the areas of whole numbers, fractions, decimals, percentages, basic measurements, simple equations, ratio and proportions, computed measurements, tables and graphs, and use of the hand-held calculator.
Content: Commercial and Recreational Small Engine Technology
Population: General

763	Auto Technology
784	Small Engine Repair
794	Fork Lift Mechanics
797	Commercial and Recreational Small Engine Technology
808	Marine Technology
S763	Approval For Teaching Preparation Level Auto Mechanics
X763	Emergency Certificate For Teaching Auto Mechanics
X797	Emergency Certificate For Teaching Commercial and Recreational Small Engine Technology

470821 - Small Engine Repair I

Grade Level: 10 - 12
Credits: 1
Description: This course introduces the student to small engines and their various applications. Also included are the identification and demonstration of hand tools, special tools, and measuring tools. It covers the selection and use of shop manuals and applying safety procedures when working with small engines.
Content: Commercial and Recreational Small Engine Technology
Population: General

763	Auto Technology
784	Small Engine Repair
794	Fork Lift Mechanics
797	Commercial and Recreational Small Engine Technology
808	Marine Technology
S763	Approval For Teaching Preparation Level Auto Mechanics
X763	Emergency Certificate For Teaching Auto Mechanics
X797	Emergency Certificate For Teaching Commercial and Recreational Small Engine Technology

470836 - Special Topics - Small Engines

Grade Level: 9 - 12
Credits: 1/2 - 1
Description: Instruction related to Industrial Education - Small Engines but not described in the above courses.

Content: Commercial and Recreational Small Engine Technology
Population: General

763	Auto Technology
784	Small Engine Repair
794	Fork Lift Mechanics
797	Commercial and Recreational Small Engine Technology
808	Marine Technology
S763	Approval For Teaching Preparation Level Auto Mechanics
X763	Emergency Certificate For Teaching Auto Mechanics
X797	Emergency Certificate For Teaching Commercial and Recreational Small Engine Technology

Industrial Education - Machine Tool Technology
(470900)

470911 - Applied Machining I

Grade Level: 9 - 12
Credits: 1
Description: Consists of intermediate level skills using machining machines and surface grinders. It will include the selection of grinding wheels. Applications in milling, lathe, benchwork, and utilizing gauge blocks and the sine bar are covered in this course. Surface grinding and abrasives are introduced and properties of metals are discussed.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470912 - Applied Machining II

Grade Level: 9 - 12
Credits: 1
Description: Carries the student to higher levels in the operation of machine tools. Applications in milling, lathe, benchwork, and utilizing gauge blocks and the sine bar are covered in this course. Surface grinding and abrasives are introduced, and properties of metals are discussed.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470913 - Fundamentals of Machine Tools-A

Grade Level: 9 - 12
Credits: 1
Description: This course provides the basic principles needed for a solid foundation in machine tool technology. Areas and machines covered include shop safety, benchwork, drill press, power saw, measurement, mills, and lathes.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470914 - Fundamentals of Machine Tools-B

Grade Level: 9 - 12
Credits: 1
Description: This course provides intermediate skill development in machine tool technology. The course builds on basic skills developed in MTT 110, especially in the calculation of safe cutting speed and feed rates for the drill press, power saw, mills, and lathes. Shop safety, benchwork, and precision measurement are also emphasized.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470915 - Manual Programming

Grade Level: 9 - 12
Credits: 1
Description: This course introduces the student to CNC format and the Cartesian Coordinate System. It also introduces the student to CNC codes and programming, set-up and operation of CNC machine tools. The student will utilize process planning and manual programming for CNC equipment. The student will load a CNC program and set tool and work offsets.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470921 - Blueprint Reading for Machinists

Grade Level: 10 - 12
Credits: 1
Description: Provides the student with a beginning and advanced series of lectures, demonstrations, and practice exercise in the study of prints. Safety will be emphasized as an integral part of this course.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470922 - Mechanical Blueprint Reading

Grade Level: 10 - 12
Credits: 0.5
Description: Provides the student with an advanced series of lectures, demonstrations, and practice exercises in the study of prints involving math (both decimal and metric), combination of lines, multi-view drawings, assembly drawings, fasteners, machining and construction processes, datum coordinates, numerical control prints, sheet metal prints, welding, casting and forging prints. Safety will be emphasized.

Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470924 - Advanced Dimensioning and Measurement

Grade Level: 10 - 12
Credits: 1
Description: Presents an in-depth study of advanced industrial dimensioning principles, tolerances, fits, and A.N.S.I. standards. Exploration of the shape and geometric characteristics of parts through geometric tolerancing.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470925 - CAD/CAM/CNC

Grade Level: 10 - 12
Credits: 1
Description: This course introduces the student to CAD/CAM/CNC systems which includes CAM software. The student will utilize process planning, manual programming and CAD/CAM for CNC equipment. This student will load a CNC program and set tool and work offsets, and machine part.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470926 - Introduction to Conversational Programming

Grade Level: 10 - 12
Credits: 1
Description: Introduce students to conversational programming guidelines, which will include program preparation, conversational input, and minor editing.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470927 - Conversational Editing and Subroutines

Grade Level: 10 - 12
Credits: 1
Description: Introduces students to performing editing routines, to subroutines, and to programs that contain loops. Students will also interpret error messages from the control.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470928 - Metrology/Control Charts

Grade Level: 10 - 12
Credits: 0.5
Description: Provides the basic principles in using precision measurement instruments and their application to inspection and quality control.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470929 - Co-op I (Machine Tool)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470932 - Internship (Machine Tool)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology

AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

470979 - Special Problems (CMM)

Grade Level: 10 - 12
Credits: 1
Description: This is a course designed for the student who has demonstrated specific needs.
Content: Machine Tool Technology
Population: General

776	Machine Tool Technology
983	Manufacturing Technology
AJMT	Adjunct Instructor For Machine Tool Technology.
X776	Emergency Certificate For Teaching Machine Tool

Industrial Education - CAD/Drafting Technology
(480100)

480101 - Digital Literacy (CAD)

Grade Level: 9 - 12
Credits: 1/2 - 1
Description: The impact of computers on society, and ethical issues are presented. Students use a microcomputer and application software, including word processing, database, spreadsheets, presentation software, and the Internet, to prepare elementary documents, reports, and electronic presentations.
Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480102 - Computer Fundamentals (For CAD)

Grade Level: 9 - 12
Credits: 1/2 - 1
Description: Students use a microcomputer to develop skills in using the operating system and application software including word processing, database, spreadsheet, and the Internet. Communication skills, terminology, impact on society, technology awareness, and ethical issues are presented. This course is intended for the student with some computer-related experience or training.
Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480104 - Introduction to Surveying (For CAD)

Grade Level: 9 - 12
Credits: 1/2 - 1
Description: Introduces the elements of surveying including measurements, distance corrections, leveling, angles, area computation, computer calculations, topographic surveying, and electronic distance measuring instruments, construction surveying, GPS, and GIS.
Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480110 - Intro to Computer Aided Drafting

Grade Level: 9 - 12
Credits: 1
Description: This combined lecture and lab course is designed to introduce the student to the terminology, capabilities, and various applications of interactive computer graphics. It involves hands-on use with a graphic design workstation and the application of the fundamentals of computer assisted drafting. This course emphasizes skill development of basic computer drafting commands, techniques exploration, and in-depth study of command utilization as they apply to industrial applications.
Content: Introduction to Computer Aided Drafting
Population: General

765	Cabinet Making
769	Drafting
776	Machine Tool Technology
983	Manufacturing Technology

480111 - Basic Drafting

Grade Level: 9 - 12
Credits: 1
Description: This course introduces students to the application of elements and principles of design and the development of studio skills. These skills include conceptualizing and translating ideas into visual form through the use of thumbnails, roughs, and full-sized marker comps.
Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480112 - Intermediate Computer Aided Drafting

Grade Level: 9 - 12
Credits: 1
Description: This course is designed to introduce the student to creating symbol libraries and symbol construction. The student will learn construction of assembly drawings through file manipulation and demonstrate advanced command structure. It allows the student to explore computer drafting in-depth and to increase skill. This course will introduce the student to 3D solid models. It will allow the student to use the advanced functions of rendering.
Content: Computer Aided Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480113 - Engineering Graphics

Grade Level: 9 - 12
Credits: 1
Description: This is an in-depth study of advanced industrial dimensioning principles, tolerances, fits, and ANSI standards. The shape and geometric characteristics of parts will be explored through geometric tolerancing. The student will also study the basic fundamentals of precision measurement and its application in the industrial setting.
Content: Drafting
Population: General

769	Drafting

S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480114 - Interdisciplinary Geometry and Computer Aided Drafting (CAD)

Grade Level: 9 - 12
Credits: 1
Description: Two computer aided drafting (CAD) courses meet the required geometry credit and one CAD credit.
Content: Computer Aided Drafting for Geometry Requirement
Population: General

769	Drafting
A70	Area Specialization: Mathematics-Physical Science
AJMA	Adjunct Instructor For Math, Grades 8-12
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
C71	Teaching Minor: Mathematics
CFMA	Provisional One-Year College Faculty Certificate for Teaching Math, Grades 8-12
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
QMA	Teaching Field: Mathematics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
X71	Emergency Certificate For Teaching Mathematics

480116 - Architectural Design

Grade Level: 10 - 12
Credits: 1
Description: Combines the elements and fundamentals of architectural design with the theory and application of presentation techniques. Deals with site selection, use of materials in design, spatial relationships, and aesthetics. Traditional and contemporary design, designers, processes, and historical milestones are explored. Board and computer techniques are used in illustrating interiors of student designs.
Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480117 - Introduction to Architecture

Grade Level: 10 - 12
Credits: 1
Description: Provides a practical approach to architectural drafting. An introduction to board and computer aided drafting as it relates to residential and commercial architecture, specifications, and structural systems including wood, masonry, concrete, and steel.

Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480119 - Construction Drafting (Techniques)

Grade Level: 10 - 12
Credits: 1
Description: This lecture and lab course covers the elements for constructing standard residential and commercial buildings. Wood frame, solid masonry veneer, concrete, and steel construction details are explored. Students will learn essentials of standard construction details, which illustrate the various construction methods and will develop a portfolio for those techniques.
Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480127 - Industrial Drafting Processes

Grade Level: 10 - 12
Credits: 1
Description: Explores weldment design, welding symbols, welding processes, and fabrication techniques, tool and die, and jig and fixture drawings. Design specifications, pattern drawings, casting, forming processes, and mechanical drawing principles in relation to the manufacturing industry. Screw-thread design and related fastening concepts as they relate to manufactured items and construction.
Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480133 - Introduction to GIS

Grade Level: 10 - 12
Credits: 1/2 - 1
Description: This is an introductory course designed to provide basic theories and concepts of geographical information systems including basic GIS capabilities, data collection, data types, GPS, and basic mapping concepts. Introduces GIS software using industry-specific applications and technology to provide a conceptual base to build expertise in GIS.
Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480135 - Mechanical Design

Grade Level: 10 - 12
Credits: 1
Description: Explores the design process involved in the development of mechanical working drawings and the design principles in various manufacturing disciplines; gear drawing and design, and cam and follower drawing and design. Design principles, mechanical adaptation, and their drawing practices. Mechanical assemblies, machine design, power transmission, bearings, and seals in assemblies. Shop processes involved in these mechanical designs.
Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480136 - Parametric Modeling

Grade Level: 10 - 12
Credits: 1
Description: Introduces Parametric Modeling and Design of a CAD workstation in exploring the techniques associated with drafting and design using Parametric modeling software. Introduces creation of parametric models and explores associative function and flexibility of concurrent part design.
Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480142 - Co-op I (CAD)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Computer Aided Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480145 - Internship (CAD)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Computer Aided Drafting
Population: General

769	Drafting

S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480179 - Special Problems (CAD)

Grade Level: 10 - 12
Credits: 1
Description: Students will expand their portfolio of CAD drawings and related work specific to the occupational opportunities in specific geographical locations. Assignments and curriculum will vary as determined by the program instructor.
Content: Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

480199 - Special Topics - CAD

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Industrial Education - CAD but not described in the above courses.
Content: Computer Aided Drafting
Population: General

769	Drafting
S769	Approval For Teaching Preparation Level Drafting
X769	Emergency Certificate For Teaching Drafting

Industrial Education - Printing Technology
(480300)

480301 - Co-op I (Graphic Tech)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Printing Technology
Population: General

767	Commercial Art
772	Graphic Arts
S772	Approval For Teaching Preparation Level Graphic Arts
X772	Emergency Certificate For Teaching Graphic Arts

480304 - Internship (Graphic Tech)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Printing Technology
Population: General

767	Commercial Art
772	Graphic Arts
S772	Approval For Teaching Preparation Level Graphic Arts
X772	Emergency Certificate For Teaching Graphic Arts

480321 - Press I

Grade Level: 9 - 12
Credits: 1
Description: This course introduces the proper method of operating an offset duplicator including adjustments needed to produce quality printed products.
Content: Printing Technology
Population: General

767	Commercial Art
772	Graphic Arts
S772	Approval For Teaching Preparation Level Graphic Arts

X772	Emergency Certificate For Teaching Graphic Arts

480323 - Computer Layout and Design

Grade Level: 9 - 12
Credits: 1
Description: Students will understand and apply concepts and mechanics of page layout. This course provides practical application in the operation and development of skills in electronic publishing using software packages and operating systems.
Content: Printing Technology
Population: General

767	Commercial Art
772	Graphic Arts
S772	Approval For Teaching Preparation Level Graphic Arts
X772	Emergency Certificate For Teaching Graphic Arts

480324 - Typography

Grade Level: 9 - 12
Credits: 1
Description: This course will introduce the elements and uses of typographic design including selection of type styles, fonts, and methods of type specification.
Content: Printing Technology
Population: General

767	Commercial Art
772	Graphic Arts
S772	Approval For Teaching Preparation Level Graphic Arts
X772	Emergency Certificate For Teaching Graphic Arts

480325 - Graphic Communication

Grade Level: 9 - 12
Credits: 1
Description: This course introduces printing processes and develops graphic communication concepts and vocabulary. Includes: color applications, characteristics of paper, safety, and copyright laws.
Content: Printing Technology
Population: General

767	Commercial Art
772	Graphic Arts
S772	Approval For Teaching Preparation Level Graphic Arts
X772	Emergency Certificate For Teaching Graphic Arts

480328 - Computer Fundamentals for Visual Communication

Grade Level: 10 - 12
Credits: 1
Description: Emphasizes skills and awareness of computer applications that are specific to industry in a program area. Allows for the customization of computer-related course offerings for industry specific needs and to fulfill the computer fundamentals requirement. Must be completed with a letter grade of "C" or better. Satisfies the computer literacy requirement.
Content: Printing Technology
Population: General

767	Commercial Art
772	Graphic Arts
S772	Approval For Teaching Preparation Level Graphic Arts
X772	Emergency Certificate For Teaching Graphic Arts

480329 - Digital Production

Grade Level: 10 - 12
Credits: 1
Description: Presents principles, concepts, techniques, and materials used in the technical application of software as it relates to commercial and graphic design. Develops primary skills using software applications to digitally manipulate, enhance, and create composite photographs.
Content: Printing Technology
Population: General

767	Commercial Art
772	Graphic Arts
S772	Approval For Teaching Preparation Level Graphic Arts
X772	Emergency Certificate For Teaching Graphic Arts

480330 - Finishing and Binding

Grade Level: 10 - 12
Credits: 1
Description: Emphasizes finishing and binding operations needed to complete a printed job including handling, figuring, cutting, and using and maintaining finishing and binding equipment.
Content: Printing Technology
Population: General

767	Commercial Art
772	Graphic Arts
S772	Approval For Teaching Preparation Level Graphic Arts
X772	Emergency Certificate For Teaching Graphic Arts

Industrial Education - Welding
(480500)

480501 - Cutting Processes

Grade Level: 9 - 12
Credits: 0.5 - 1
Description: A working knowledge of various cutting processes used by the welding industry. Will include, but is not limited to, safety, theory of operation, setup and operating techniques, troubleshooting, and making minor equipment repairs, terms and definitions, identification, evaluation, repair and prevention of discontinuities of cut surfaces. Includes oxy-fuel cutting, plasma arc cutting, exothermic cutting, air carbon arc cutting, shielded metal arc cutting, and mechanical cutting process.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480505 - Blueprint Reading for Welding

Grade Level: 9 - 12
Credits: 0.5 - 1
Description: Provides a study of occupationally specific prints for welders. Advanced study of multi-view drawings, assembly drawings, datum dimensions, numerical control drawings, sheet metal prints, castings and forgings, instrumentation and control charts and diagrams, working drawings, geometric dimensioning and tolerancing and use of reference materials and books are included. Occupational specifics including welding drawings, symbols, joint types, grooves, pipe welding symbols, testing symbols, and specification interpretations are stressed.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480507 - Welding Certification

Grade Level: 11 - 12
Credits: 1
Description: Provides the student with a working knowledge of certification encountered in welding. The student will start with developing a WPS, qualify the WPS, and qualify personnel. Documents used in welding certification are developed and used.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding

X788 Emergency Certificate For Teaching Welding

480508 - Welding Certification Lab

Grade Level: 10 - 12
Credits: 0.5
Description: Provides the student with an opportunity to test to certification standards on all types of welding.
Content: Welding
Population: General

788 Welding
AJWLD Adjunct Instructor for Welding
S788 Approval For Teaching Preparation Level Welding
X788 Emergency Certificate For Teaching Welding

480521 - Shielded Metal Art Welding (SMAW)

Grade Level: 9 - 12
Credits: 0.5 - 1
Description: This course provides experiences in which students acquire the manipulative skills to do groove welds in all positions with backing.
Content: Welding
Population: General

788 Welding
AJWLD Adjunct Instructor for Welding
S788 Approval For Teaching Preparation Level Welding
X788 Emergency Certificate For Teaching Welding

480522 - Gas Metal Arc Welding

Grade Level: 9 - 12
Credits: 0.5 - 1
Description: This course is designed to teach students the identification, inspection, and maintenance of GMAW machines; identification, selection and storage of GMAW electrodes; principles of GMAW; and the effects of variables on the GMAW process. Theory and applications of related processes such as FCAW and SAW and metallurgy are also included.
Content: Welding
Population: General

788 Welding
AJWLD Adjunct Instructor for Welding
S788 Approval For Teaching Preparation Level Welding
X788 Emergency Certificate For Teaching Welding

480523 - Oxy-Fuel Systems

Grade Level: 9 - 12
Credits: 0.5 - 1
Description: This course is designed to provide the student with a working knowledge of: oxy-fuel identification, set-up, inspection, and maintenance; consumable identification, selection and care; principles of operation; and effects of variables for manual and mechanical oxyfuel cutting, welding, brazing principles and practice, and metallurgy, shop safety and equipment use are also covered.

Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480524 - Basic Welding

Grade Level: 9 - 12
Credits: 0.5 - 1
Description: This class introduces the student to the art and science of welding. Students learn to prepare the equipment and to perform basic welding operations. (WEX 120/121 may be substituted for WEX 151)
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480525 - Gas Tungsten Arc Welding

Grade Level: 10 - 12
Credits: 0.5 - 1
Description: This course is designed to teach students the identification, inspection, and maintenance of GTAW machines; identification, selection and storage of GTAW electrodes; principles of GTAW; the effects of variables on the GTAW process; and metallurgy. This course also teaches the theory and application of Plasma Arc Cutting.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480528 - SMAW Groove Welds with Backing Lab

Grade Level: 10 - 12
Credits: 1
Description: Provides experiences in which students acquire the manipulative skills to do groove welds in all positions with backing.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480530 - Gas Tungsten Art Welding Groove Lab (GTAW Lab)

Grade Level: 10 - 12
Credits: 1
Description: Teaches the method of operation and application of the Gas Tungsten Arc Welding process for welding groove welds in both ferrous and non-ferrous plate in all positions.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480533 - Gas Metal Arc Welding (GMAW) Groove Lab

Grade Level: 10 - 12
Credits: 1
Description: Teaches the method of operation and application of the Gas Metal Arc Welding process for welding groove welds in both ferrous and non-ferrous plate in all positions using both short circuiting and spray transfer where appropriate.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480534 - Gas Metal Arc Welding (GMAW) Aluminum Lab

Grade Level: 10 - 12
Credits: 0.5
Description: Teaches welding aluminum using GMAW process. Fillet and groove welds are made in all positions on both plate and pipe. Short circuiting and spray transfers are used where appropriate.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480535 - SMAW Open Groove Lab

Grade Level: 10 - 12
Credits: 1
Description: Designed to build upon SMAW Plate Lab I and II. Offers the student the opportunity to advance skills in the practical aspects of vee-butt plate welding using SMAW.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480536 - Shielded Metal Arc Welding Pipe Lab A

Grade Level: 10 - 12
Credits: 1
Description: Teaches the required manipulative skills to arc weld pipe using mild steel electrodes in the 2G and 5G positions including proper pipe preparations, electrodes, safety precautions, and welding sequences. Fillet welds on pipe joints are also included in 2F, 2FR, 4F, and 5F positions.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480537 - Shielded Metal Arc Welding Pipe Lab B

Grade Level: 10 - 12
Credits: 1
Description: Teaches the required manipulative skills to arc weld pipe using mild steel electrodes in the 6G position including proper pipe preparations, electrodes, safety precautions, and welding sequences.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480538 - Gas Tungsten Arc Welding Pipe Lab A

Grade Level: 10 - 12
Credits: 1
Description: Teaches the method of operation and application of the Gas Tungsten Arc Welding system for welding of both ferrous and non-ferrous pipe in 2G and 5G positions.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480540 - Gas Metal Arc Welding (GMAW) Pipe Lab A

Grade Level: 10 - 12
Credits: 1
Description: Acquaints the student with the operation and application of the Gas Metal Arc System for welding pipe in 2G and 5G positions.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding

X788	Emergency Certificate For Teaching Welding

480541 - Co-op I (Welding)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480544 - Internship (Welding)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480595 - Special Problems (for Welding)

Grade Level: 11 - 12
Credits: 1
Description: This course is designed for the student who has demonstrated a specific need for industry related skills.
Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

480599 - Special Topics - Welding

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Welding but not described in the above courses.

Content: Welding
Population: General

788	Welding
AJWLD	Adjunct Instructor for Welding
S788	Approval For Teaching Preparation Level Welding
X788	Emergency Certificate For Teaching Welding

Industrial Education - Wood Manufacturing Technology (480700)

480711 - Introduction to Panel Technology

Grade Level: 9 - 12
Credits: 1
Description: This course is an overview of the terminology, materials, processing equipment and related software utilized by panel processing manufacturers of residential and commercial case work. Emphasis will be placed on the design and fabrication of frameless cabinetry to the use of panel saws, edgebanders, CNC boring equipment, and case clamps.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480712 - Computer Applications (Wood)

Grade Level: 9 - 12
Credits: 1
Description: Students learn about the operation of the computer hardware components, PC operating systems, and software applications. Fundamentals of the Microsoft Windows operating systems are covered along with MS-DOS essentials. Students are introduced to word processing, spreadsheet, and database applications using Microsoft Office.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480716 - Lumber Grading and Drying

Grade Level: 10 - 12
Credits: 1
Description: This course prepares an individual to master the National Hardwood Lumber Association's rules for grading hardwoods and to apply those rules in a production setting. Students will identify species and use a deductive process to grade the lumber and assign it a monetary value. Students will also be introduced to hardwood lumber drying systems. Conventional dry kilns, dehumidification, vacuum, and solar kilns are illustrated. Current theories on drying lumber to minimize defects and increase quality are demonstrated. Computer controls are explained.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480717 - Millwork Technology

Grade Level: 10 - 12
Credits: 1
Description: Design of moulding, doors, and door frames; windows; stairs; and mantels are the focus of this course. Emphasis will be placed on construction principles, joinery, and fasteners for millwork assemblies. Each student will build one or more millwork items.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480718 - Moulder/Grinder Operation

Grade Level: 10 - 12
Credits: 0.5
Description: This course is an introduction to the setup, operation, and maintenance of moulding and grinding equipment. The student will use tools, measuring devices, and visual inspection techniques to insure quality to customer specifications. Students will set up and operate a moulder or plane, shape and groove woodstock. Students will read work tickets and examine the pattern shape to determine moulder setup procedure and type of woodstock to be cut.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480719 - Technical Drawing and Blueprint Reading

Grade Level: 10 - 12
Credits: 0.5
Description: Fundamentals of multiview and pictorial drafting techniques; and reading and interpreting architectural, furniture, and cabinet drawings are the focus of this course. Students will apply blueprint reading skills by preparing materials and cutting lists for actual jobs.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480720 - Wood Finishing

Grade Level: 10 - 12
Credits: 0.5
Description: This course is an overview of contemporary spray finishing materials and processes for millwork assemblies. Each student will learn to set up and troubleshoot a variety of common finishing systems while experimenting with finishing materials and supplies.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making

809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480721 - Furniture Technology

Grade Level: 9 - 12
Credits: 1
Description: Furniture design principles, structural considerations, joinery, fasteners, veneering, and use of specialized machines for complex operations are the focus of this course. Each student will plan and build a piece of furniture which includes at least one drawer, a door and some veneering.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480725 - CAD for Wood Technology

Grade Level: 10 - 12
Credits: 1
Description: This course is designed for the fundamental principles and capabilities of CAD, basic drafting conventions and operations that are relative to the Wood Manufacturing Industry.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480731 - Cabinet Making Technology

Grade Level: 9 - 12
Credits: 1
Description: This course is an overview of the cabinet and store fixture industries. Emphasis will be placed on the design and construction of face frame as well as frameless (32mm) systems. Each student will plan and build a vanity, kitchen cabinet, or store fixture which utilizes contemporary casework techniques.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480733 - Advanced Wood Processing

Grade Level: 10 - 12
Credits: 1
Description: This course is a capstone experience for advanced wood processing technicians involving the integration of computer aided design and world-class manufacturing of wood products.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology

S765	Approval For Teaching Preparation Level Cabinet Making

480740 - Wood Products Manufacturing

Grade Level: 9 - 12
Credits: 1
Description: Fundamentals of wood processing and an overview of the secondary wood processing industry are covered in this course. The nature of wood, material selection, terminology, safe setup, and operation of common woodworking equipment will be discussed. Each student will fabricate a wood product while being introduced to custom woodworking techniques, as well as mass production concepts related to product engineering.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480741 - Co-op I (Wood)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480744 - Internship (Wood)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480795 - Special Problems (for Wood Manufacturing)

Grade Level: 11 - 12
Credits: 1
Description: This course is designed for the student who has demonstrated a specific need for industry

related skills.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

480799 - Special Topics - Wood Manufacturing Technology

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Wood Manufacturing Technology but not described in the above courses.
Content: Wood Manufacturing Technology
Population: General

765	Cabinet Making
809	Wood Manufacturing Technology
S765	Approval For Teaching Preparation Level Cabinet Making

Industrial Education - Metal Fabrication
(480800)

480801 - Industrial Maintenance for Metal Fabrication

Grade Level: 10 - 12
Credits: 1
Description: This course introduces various types of sheet metal designs, fabrication, and fastening techniques used in the sheet metal industry.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480802 - Blueprint Reading for Construction (For Metal Fabrication)

Grade Level: 9 - 12
Credits: 0.5
Description: This course will provide a series of lectures, demonstrations, and practice exercises in the study of symbols, views, sections, details, and material lists found on architectural working drawings, building materials and specifications lists, and construction dimensioning systems and charts/schedules.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480803 - Co-op I (Metal Fab)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480806 - Internship (Metal Fab)

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480811 - TQM

Grade Level: 9 - 12
Credits: 1
Description: Introduces the student to fundamental of TQM (Total Quality Management) principles and techniques as an integral part of the business environment. Teamwork and team-building strategies are discussed and are incorporated into the framework of the instruction as well as a few team-building exercises.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480812 - Heat Load/Duct Design

Grade Level: 9 - 12
Credits: 1
Description: Introduces the fundamentals needed to calculate heat gain and heat loss, thereby determining air conditioner/furnace size. This information will be used to calculate the correct duct size. Procedures to lay out a duct system as outlined in ACCA MANUAL D are presented.
Content: HVAC Metal Fab
Population: General

760	Air Conditioning & Heating
776	Machine Tool Technology
783	Sheet Metal

480813 - Parallel Line Layout

Grade Level: 9 - 12
Credits: 1
Description: This course introduces the parallel line method of developing the pattern for an object.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480814 - Radial Line Development

Grade Level: 10 - 12
Credits: 1
Description: Radial Line Development uses many of the procedures of parallel line development and triangulation. The student will learn to develop patterns from any centered, round or square taper, using the radial line method.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480816 - Metal Trade Information and Metals

Grade Level: 10 - 12
Credits: 0.5
Description: A series of lectures and demonstrations of hand tools, use of machinery in the shop, and various types of metal and their uses in the metal trade will be discussed.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480817 - Sheet Metal I - A

Grade Level: 10 - 12
Credits: 1
Description: This course introduces the student to figuring drawings of plans for a duct system and also learning how to fabricate the ducts.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480818 - Sheet Metal I - B

Grade Level: 10 - 12
Credits: 1
Description: This course provides advanced training in designing and interpreting plans for a duct system and advanced fabrication of duct systems and precision sheet metal concepts.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480819 - Sheet Metal II - A

Grade Level: 10 - 12
Credits: 1
Description: This course provides a series of lectures to improve skills in pattern development and fabrication of more difficult fittings.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480820 - Sheet Metal II - B

Grade Level: 10 - 12
Credits: 1
Description: This course provides a series of advanced lectures to improve skills in advanced pattern development and fabrication of complicated fittings.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480825 - Sheet Metal Print Reading

Grade Level: 10 - 12
Credits: 0.5
Description: This course presents basic applied math, lines, multiview drawings, symbols, various schematics and diagrams, dimensioning techniques, sectional views, auxiliary views, and sketching typical to sheet metal drawings. Safety will be emphasized as an integral part of the course.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480826 - Triangulation

Grade Level: 10 - 12
Credits: 1
Description: This course involves working from two known points to locate a third point.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480831 - Industrial Maintenance

Grade Level: 9 - 12
Credits: 1
Description: This course introduces various types of sheet metal designs, fabrication, and fastening

techniques used in the sheet metal industry.
Content: Industrial Maintenance Technology
Population: General

792	Industrial Machine Maintenance
799	Power Technology
805	Hydraulics/Pneumatics
983	Manufacturing Technology
S983	Approval For Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance
X799	Emergency Certificate For Teaching Power Technology

480879 - Special Projects I (Metal Fab)

Grade Level: 10 - 12
Credits: 1
Description: This is a course designed for the student who has demonstrated specific special needs.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

480899 - Special Topics - Metal Fabrication

Grade Level: 9 - 12
Credits: .5-1
Description: Instruction related to Industrial Education - Metal Fabrication but not described in the above courses.
Content: Metal Fabrication
Population: General

776	Machine Tool Technology
783	Sheet Metal
X776	Emergency Certificate For Teaching Machine Tool

Industrial Arts - Media Arts
(480900)

480901 - Introduction to Media Arts

Grade Level: 9 - 11
Credits: 1
Description: An introduction to and survey of the creative and conceptual aspects of designing media arts experiences and products, including techniques, genres and styles from various and combined mediums and forms, including moving image, sound, interactive, spatial and/or interactive design. Typical course topics include: aesthetic meaning, appreciation and analysis; composing, capturing, processing and programming of media arts products, experiences and communications; their transmission, distribution and marketing; as well as contextual, cultural, and historical aspects and considerations.
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

480902 - Interactive Design

Grade Level: 10 - 12
Credits: 1
Description: The creative and conceptual aspects of designing and producing interactive media arts experiences, products and services, including reactive (sensory-based [touch, proximity, movement, etc.] devices) and interactive technologies, 3D video game animation, interface design, mobile device applications, web multimedia, social media based, augmented, and/or virtual reality. Typical course topics include: aesthetic meaning, appreciation and analysis; construction, development, processing, modeling, simulation and programming of interactive experiences; their transmission, distribution and marketing, as well as contextual, cultural and historical aspects and considerations.
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

480903 - Moving Image Animation

Grade Level: 10 - 12
Credits: 1
Description: The creative and conceptual aspects of designing and producing animated images for the variety of storytelling and multimedia presentations including: dramatic narratives, artistic and experimental presentations and/or installations, ambient, interactive, immersive and performance media, etc. Typical course topics include: aesthetic meaning, appreciation and analysis of animation; all processes of development including: composition and rendering, animation physics and expressions; techniques, forms and technologies; modeling and programming; pre-production planning and organization; production and post-production methods, tools and processes; animation presentation, transmission, distribution and marketing; as well as contextual, cultural, and historical aspects and considerations.
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

480904 - Virtual Design

Grade Level: 11 - 12
Credits: 1
Description: The creative and conceptual aspects of designing and producing simulative, virtual, 3D media arts experiences, products and services, including: environments, structures, objects, architecture and ecologies, virtual and augmented reality. Typical course topics include: aesthetic meaning, appreciation and analysis; construction, development, processing, modeling, simulation and programming of experiences, structures, architecture and/or environments; their presentation, transmission, distribution and marketing, as well as contextual, cultural, and historical aspects and considerations.
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

480910 - Video Studio Fundamentals

Grade Level: 10 - 12
Credits: 1
Description: This course will expose students to the materials, processes, and artistic techniques involved in creating video productions. Students learn about the operation of cameras, lighting techniques, camera angles, depth of field, composition, storyboarding, sound capture and editing techniques. Course topics may include production values and various forms/styles of video production (e.g., documentary, storytelling, news magazines, animation, etc.) As students advance they are encouraged to develop their own artistic styles. Major cinematographers, video artists and their work may be studied.
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

480911 - Studio Directing and Performance

Grade Level: 10 - 12
Credits: 1
Description: This course explores the role of managing the production of video studio projects. Students develop knowledge and skills in studio multi-camera and field television production. Students also develop performance skills for broadcasting including interpretation of copy, news casting, and ad lib announcing. The course covers techniques of narrative and non-fiction writing and scripting, the analysis and writing of radio, television, and video materials, including storytelling and screenwriting.
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

480912 - Advanced Studio Production - Moving Images

Grade Level: 11 - 12
Credits: 1
Description: Students will explore the creative and conceptual aspects of designing and producing moving images for the variety of cinematic, film/video and multimedia presentations including: fictional dramas, documentaries, music videos, artistic and experimental presentations and/or installations, interactive, immersive and performance media, etc. Typical course topics include: aesthetic meaning, appreciation and analysis of moving imagery; all processes of development including: pre-production planning and organization, production and post-production methods, tools and processes; moving image presentation, transmission, distribution and marketing; as well as contextual, cultural, and historical aspects and considerations.
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

480920 - Two-Dimensional Media Design

Grade Level: 10 - 12
Credits: 1
Description: A proficient study and production of creative and conceptual aspects of designing and producing digital imagery, graphics and photography, including techniques, genres and styles from fine arts and commercial advertising, internet and multimedia, web design, industrial and virtual design. Students use a computer as an electronic drawing tool to solve visual communications and illustration problems in designing products. This course entails the use of current software for two-dimensional illustration, creating and integrating text, using color, and importing and exporting files, including Vector and Raster Images. Typical course topics include: aesthetic meaning, appreciation and analysis; composing, capturing, processing, and programming of imagery and graphical information; their transmission, distribution and marketing; as well as contextual, cultural and historical aspects and considerations.
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

480921 - Digital Imaging

Grade Level: 10 - 12
Credits: 1
Description: An accomplished study and production of creative and conceptual aspects of designing and producing digital imagery, graphics and photography, including techniques, genres and styles from fine arts and commercial advertising, internet and multimedia, web design, industrial and virtual design. Students use a computer as an electronic drawing tool to solve visual communications and illustration problems in designing authentic products. This course entails an accomplished use of current software for two-dimensional illustration, creating and integrating text, using color, and importing and exporting files. Typical course topics include: aesthetic meaning and analysis of computer generated works; composing, capturing, processing, and programming of imagery and graphical information; their transmission, distribution and marketing; as well as contextual, cultural and historical aspects and considerations.
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

480922 - Advanced Production Design

Grade Level: 11 - 12
Credits: 1
Description: Advanced Product Design emphasizes an advanced and independent use of compositional

theory, elements and principles of design, techniques and creative processes for effectively performing the function of persuasion and information through use of materials and media to create visual effects to produce original authentic works. Students will demonstrate an advanced level of creative expression to a variety of authentic design products (e.g. various print mediums such as magazines, newspapers, billboards, fictional and informational texts, product wrappers, displays etc.) through a purposeful arrangement of images and/or text and develop a strategic product presentation both independently and as a collaborative team. The course focuses on advanced computer generated designs as well as the use of various software and hardware; with an emphasis on students creating, producing, responding and connecting on/in visual art and new media. An in-depth independent study of career opportunities in media art is performed. Contemporary, cultural, and historical design may be studied.
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

480950 - Co-op (Media Arts)

Grade Level: 11 - 12
Credits: 1
Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in a pathway course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements according to the Work Based Learning Guide.
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

480951 - Internship (Media Arts)

Grade Level: 11 - 12
Credits: 1
Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a pathway course. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less). All information referenced to the Work Based Learning Guide
Content: Media Arts
Population: General

767	Commercial Art
772	Graphic Arts
796	Radio And TV Productions
798	Multimedia Technology
811	Digital Media
946	Computer Graphics
AJDM	Adjunct Instructor for Digital Media
X796	Emergency Certificate For Teaching Radio And TV Production
X811	Emergency Certificate For Teaching Digital Media

Industrial Education - Multiple Pathway Courses
(499900)

Courses in this section of the state course list can be applied across multiple pathways

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499901 - Foundations of Energy

Grade Level: 9 - 12
Credits: 1
Description: Foundations of Energy is a course in career and technical education for secondary students. The course provides an overview of renewable and nonrenewable energy resources reflecting how energy impacts the environment and the economy from regional, state, national and global perspectives. Extensive hands-on laboratory activities are vital components of the curriculum. This course can provide a basis for students working toward various career pathways in energy such as Engineering Technology, Construction, and Manufacturing Technology. Specific areas include technology, construction technology, electrical technology, and industrial electronics. NOTE: A content must be manually assigned for this course using the section tab in the SIS.
Content: None
Population: General

499910 - Industrial Education Co-op

Grade Level: 11 - 12
Credits: 1-3
Description: Cooperative Education for CTE courses indicated within the KY Department of Education provide supervised work site experience related to the student's identified career major. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements. NOTE: A content must be manually assigned for this course using the section tab in the SIS
Content: None
Population: General

499915 - Industrial Education Internship

Grade Level: 11 - 12
Credits: 1-3
Description: Internship for CTE Courses provide supervised work-site experience for high school students who have completed courses leading to a career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. Students receiving pay for intern experience are those participating in an experience that is a semester or longer and have an established employee-employer relationship. A non-paid internship affects those students who participate on a short term basis. NOTE: A content must be manually assigned for this course using the section tab in the SIS
Content: None
Population: General

499920 - Basic Blueprint Reading

Grade Level: 10 - 12
Credits: .5
Description: This course presents basic applied math, lines, multiview drawings, symbols, various schematics and diagrams, dimensioning techniques, sectional views, auxiliary views, threads and fasteners, and sketching typical to all shop drawings. Safety will be emphasized as an integral part of the course.
Content: Basic Blueprint Reading
Population: General

760	Air Conditioning & Heating
764	Building Maintenance
766	Carpentry
773	Electricity
777	Masonry
780	Plumbing
788	Welding
792	Industrial Machine Maintenance
795	General Miner
799	Power Technology
801	Building Construction
983	Manufacturing Technology
X764	Emergency Certificate For Teaching Building Maintenance

499925 - Basic Troubleshooting

Grade Level: 9 - 12
Credits: 1
Description: This course explores the science of troubleshooting and the importance of proper maintenance procedures; how to work well with others, aids in communication, and trade responsibilities; examines actual troubleshooting techniques, aids in troubleshooting, and how to use schematics and symbols; focuses on specific maintenance tasks such as solving mechanical and electrical problems, breakdown maintenance, and the how's and whys of planned maintenance.
Content: Basic Troubleshooting
Population: General

733	Electronics
773	Electricity
792	Industrial Machine Maintenance
795	General Miner
799	Power Technology
983	Manufacturing Technology
X792	Emergency Certificate For Teaching Industrial Machine Maintenance

499930 - Industrial Safety

Grade Level: 10 - 12
Credits: .5
Description: This course provides practical training in industrial safety. The students are taught to observe general safety rules and regulations, to apply work site and shop safety rules, and to apply OSHA regulations. Students are expected to obtain certification in first aid and cardiopulmonary resuscitation.
Content: Industrial Safety
Population: General

728	Plastics Technology
729	Engineering Technology
731	Computer Systems Technology
733	Electronics
760	Air Conditioning & Heating
761	Appliance Repair

762	Auto Body Repairs
763	Auto Technology
764	Building Maintenance
765	Cabinet Making
766	Carpentry
767	Commercial Art
768	Diesel Technology
769	Drafting
771	Electronics
772	Graphic Arts
773	Electricity
774	Commercial Sewing
775	Interior Finishing
776	Machine Tool Technology
777	Masonry
779	Office Machine Repair
780	Plumbing
781	Radio And TV Repair
782	Service Station Attendant
783	Sheet Metal
784	Small Engine Repair
786	Truck Mechanics
787	Upholstery
788	Welding
790	Mine Equipment Operator
791	Air Craft Mechanic
792	Industrial Machine Maintenance
793	Auto Parts
794	Fork Lift Mechanics
795	General Miner
796	Radio And TV Productions
797	Commercial and Recreational Small Engine Technology
799	Power Technology
800	Heavy Equipment Repair
801	Building Construction
802	Truck Driving And Transportation Occupation
803	Airframe And Power Plant Mechanics
804	Meat Cutting
805	Hydraulics/Pneumatics
806	Aviation Technology
808	Marine Technology
809	Wood Manufacturing Technology
810	Environmental Technology
923	Commercial Foods
983	Manufacturing Technology
984	Materials Handling
985	Industrial Chemical Technology
X806	Emergency Certificate For Teaching Aviation Technology